

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*Lease Serial No.
NMLC029509B

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
RAGNAR FEDERAL COM 16H9. API Well No.
30-025-43272-00-X110. Field and Pool or Exploratory Area
MALJAMAR11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
COG OPERATING LLCContact: KANICIA CASTILLO
E-Mail: kcastillo@concho.com3a. Address
ONE CONCHO CENTER 600 W ILLINOIS AVENUE
MIDLAND, TX 79701-42873b. Phone No. (include area code)
Ph: 432-685-43324. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 22 T17S R32E NWNE 100FNL 1870FEL**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☒ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Drilling Operations
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Please see attached logs.

Denied NMOCB
PAUL.KANTZ@STATE-NM-US
LOGS NOT SUBMITTED IN
CORRECT FORMAT. 1 SHEET
CONTINUOUS PAPER.
RE SUBMIT LOG IN
CORRECT FORMAT

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #377110 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Hobbs
Committed to AFMSS for processing by DEBORAH MCKINNEY on 05/24/2017 (17DLM1123SE)

Name (Printed/Typed) KANICIA CASTILLO

Title PREPARER

Signature (Electronic Submission)

Date 05/23/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

ACCEPTEDZOTA STEVENS
Title PETROLEUM ENGINEER

Date 07/10/2017

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Hobbs

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****



Cased Compensated Neutron Log

Company COG Operating L.L.C.

Well Ragnar Fed Com 16 H

Field Maljamar Field

County Lea State New Mexico

Location: API #: 30-025-43272

100 FT FNL & 1870 FT FEL
Sec 22, T17S,R32E

SEC TWP RGE

Permanent Datum Ground Level Elevation 4016 FT
Log Measured From Kelley Bushing 18 FT APD
Drilling Measured From Kelley Bushing

Other Services
Perf / Plug

Elevation

K.B. 4034 FT
D.F. 4033 FT
G.L. 4016 FT

Date	15-MAR-2017	
Run Number	One	
Depth Driller	10703 FT	
Depth Logger	6165 FT	
Bottom Logged Interval	6163 FT	
Top Log Interval	Surface	
Open Hole Size	8.75 IN	
Type Fluid	Water	
Density / Viscosity	8.33 Lb/g	
Max. Recorded Temp.	NA	
Estimated Cement Top	NA	
Time Well Ready	07:00 AM	
Time Logger on Bottom	09:00 AM	
Equipment Number	12030	
Location	Midland, TX	
Recorded By	Jose Lagos	
Witnessed By	Darin Chandler	

Borehole Record

Tubing Record

Run Number	Bit	From	To	Size	Weight	From	To
One	17.5 IN	Surface	910 FT				
Two	12.25 IN	910 FT	2192 FT				
Three	8.75 IN	2192 FT	10703 FT				

Casing Record	Size	Wgt/Ft	Top	Bottom
Surface String	13.375 IN	54.5 PPF	Surface	910 FT
Prot. String	9.625 IN	40 PPF	Surface	2192 FT
Production String	7 IN	29 PPF	Surface	5057 FT
Liner	5.5 IN	17 PPF	5057 FT	10703 FT
Marker Joint	4957 FT-4977 FT			

<<< Fold Here >>>

All interpretations are opinions based on inferences from electrical or other measurements and we cannot and do not guarantee the accuracy or correctness of any interpretation, and we shall not, except in the case of gross or willful negligence on our part, be liable or responsible for any loss, costs, damages, or expenses incurred or sustained by anyone resulting from any interpretation made by any of our officers, agents or employees. These interpretations are also subject to our general terms and conditions set out in our current Price Schedule.

Comments

Primary Log on Well

Log Correlated to Casing Cross Over at 5057 FT
Depth Correction +3 FT
Well logged using a +18 FT K.B.

HOBBS OCD

JUL 17 2017

RECEIVED

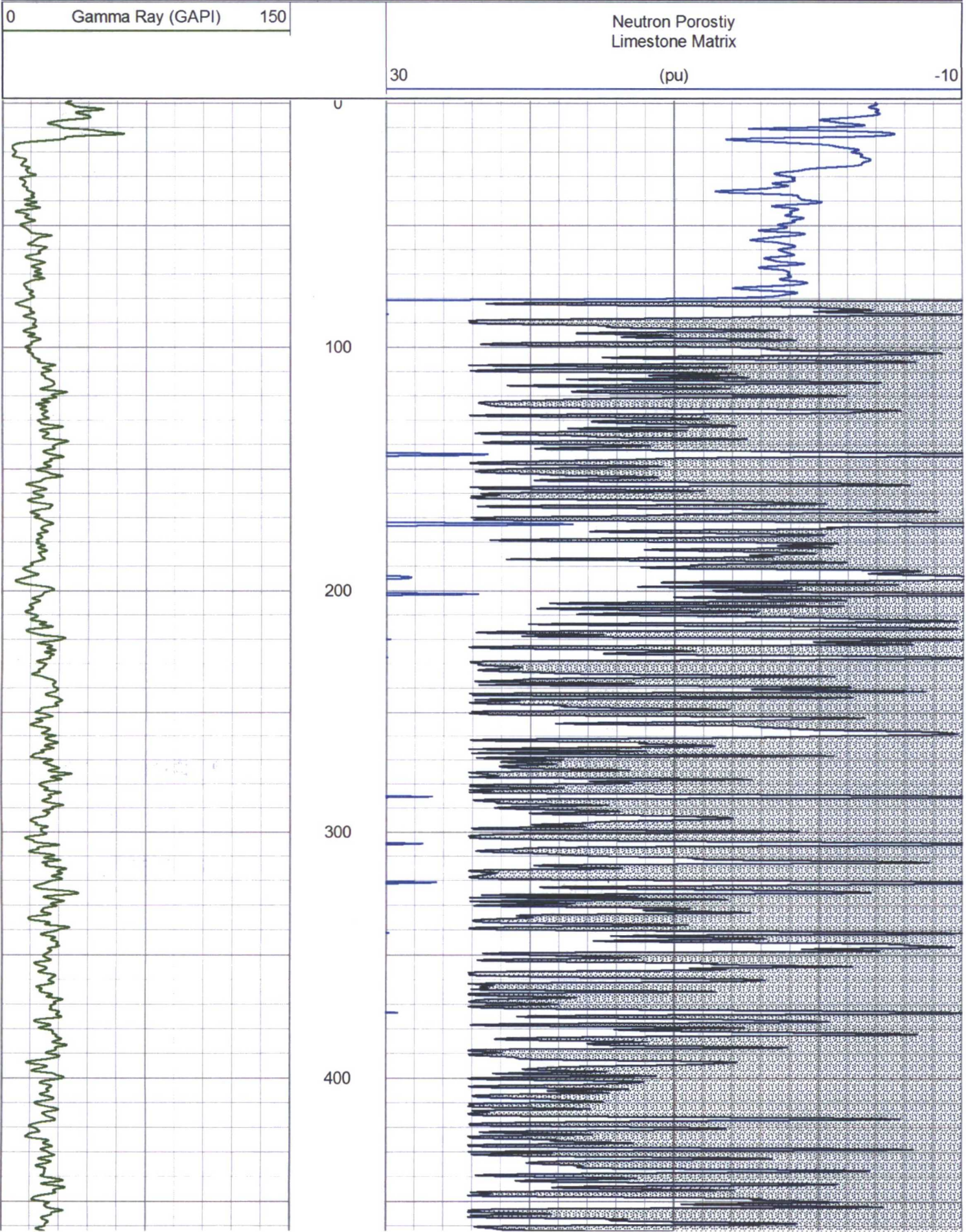
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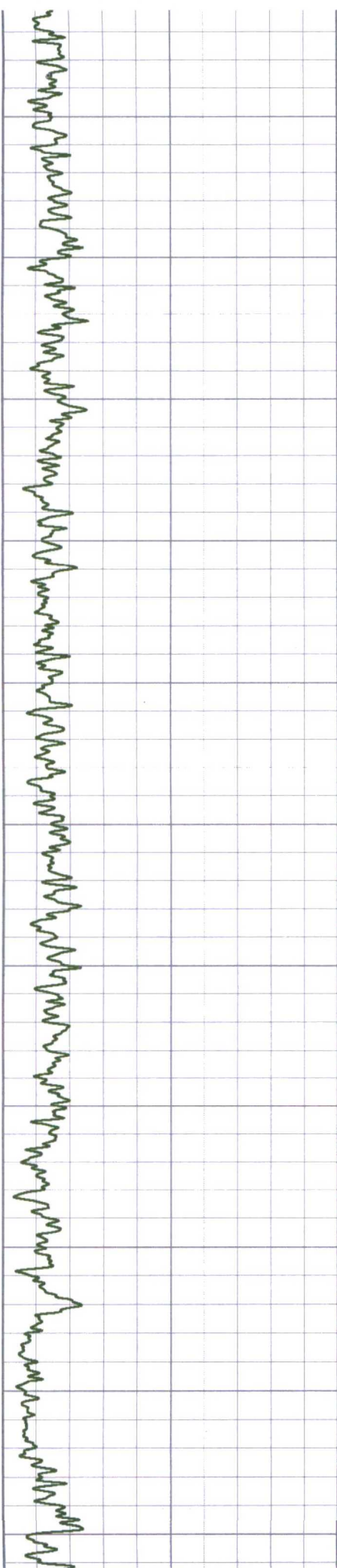
Thank you for Using Allied Horizontal Wireline Services.



Main Pass

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Presentation Format: cnl2inch
Dataset Creation: Thu Mar 16 14:30:54 2017 by Calc 7.0 B1
Charted by: Depth in Feet scaled 1:600





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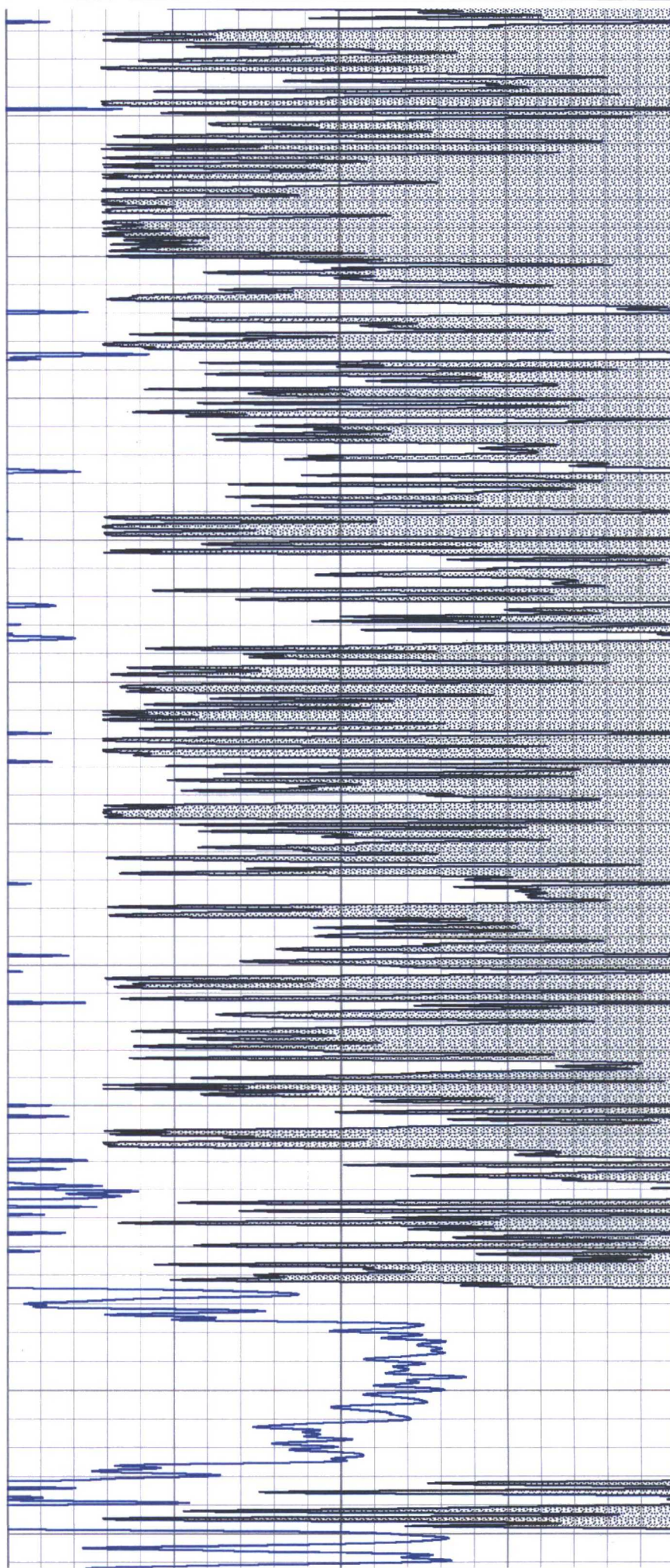
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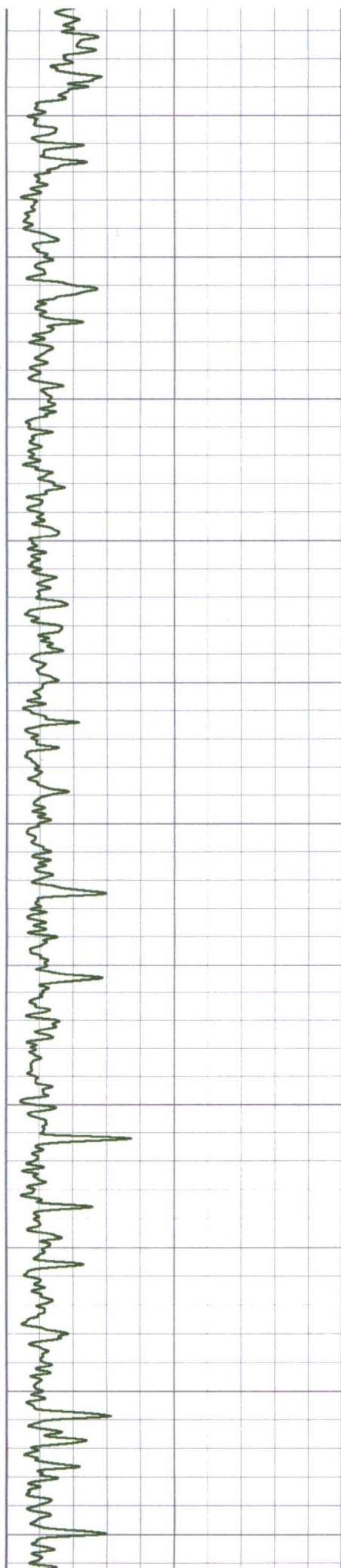
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800

900

1000





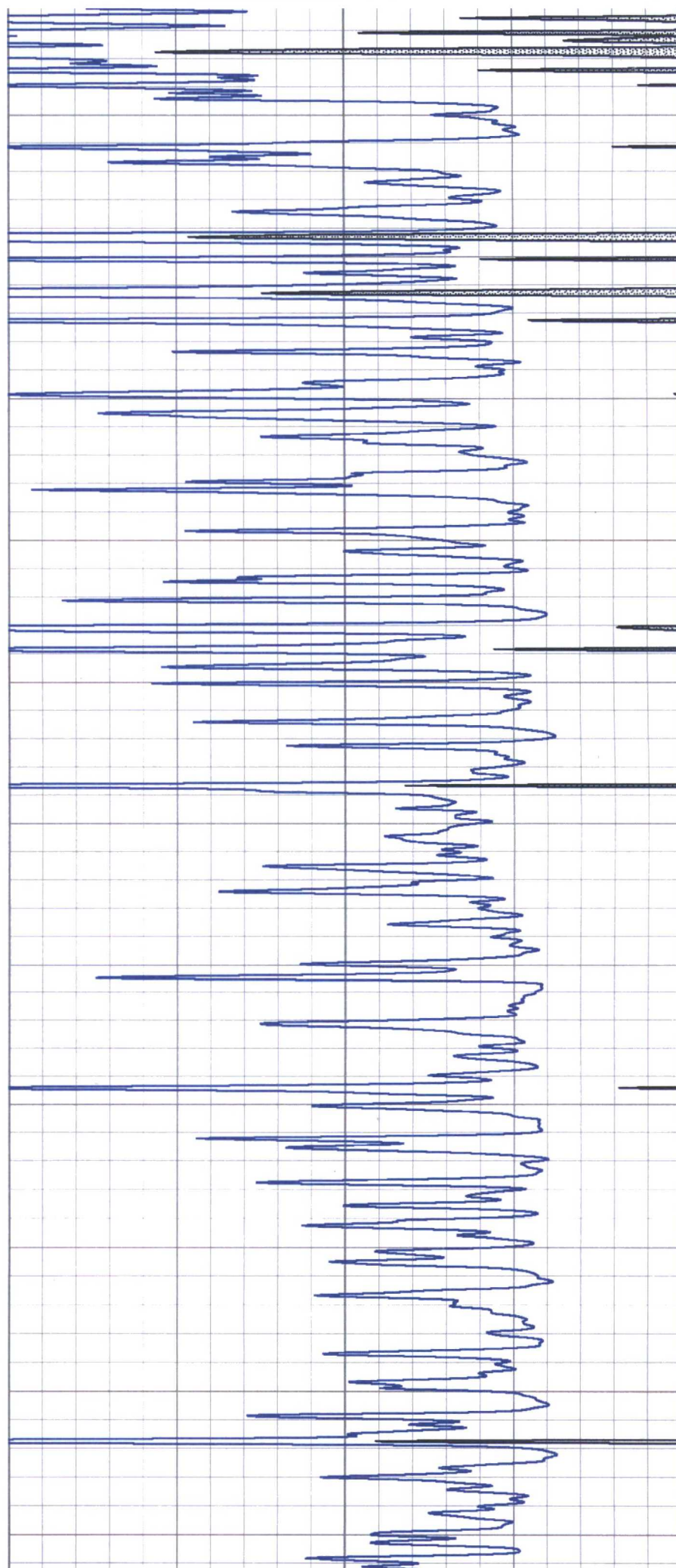
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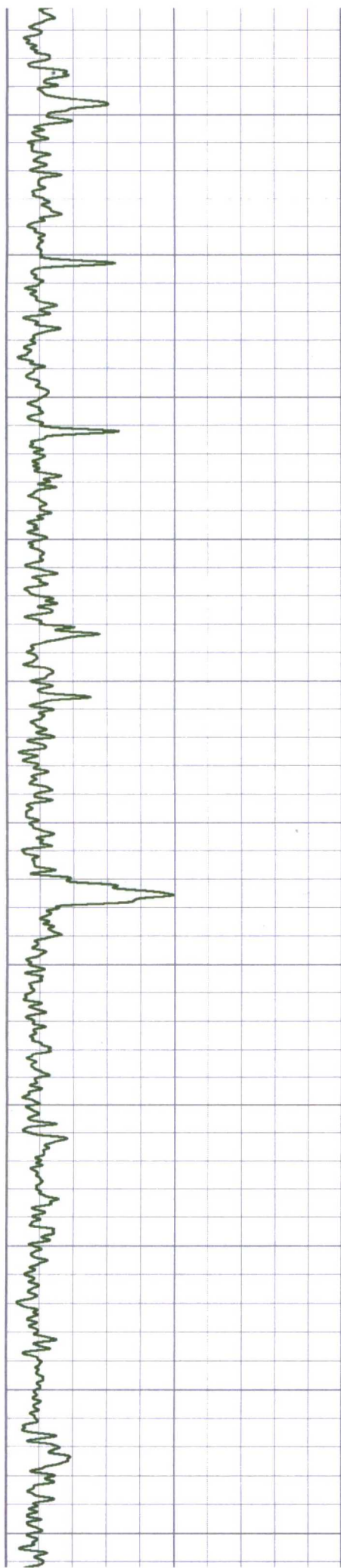
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1300

1400

1500





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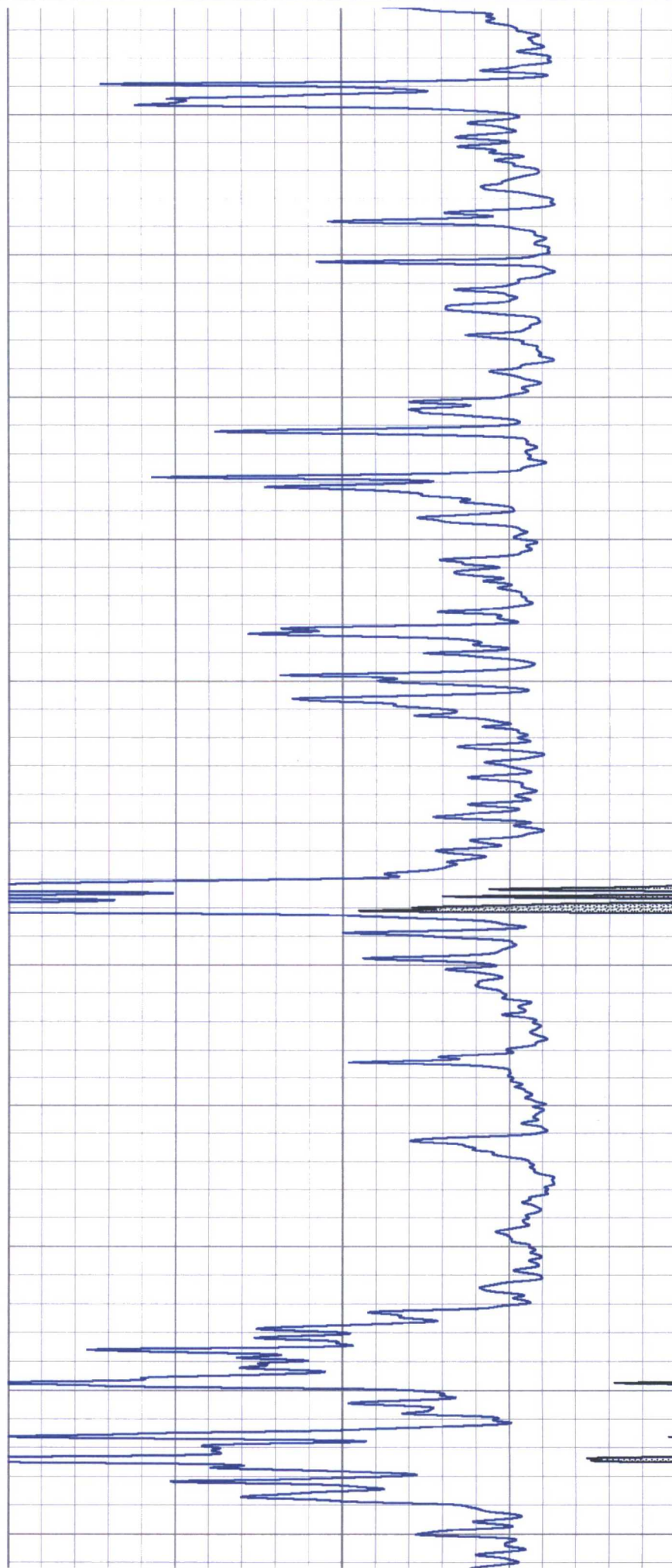
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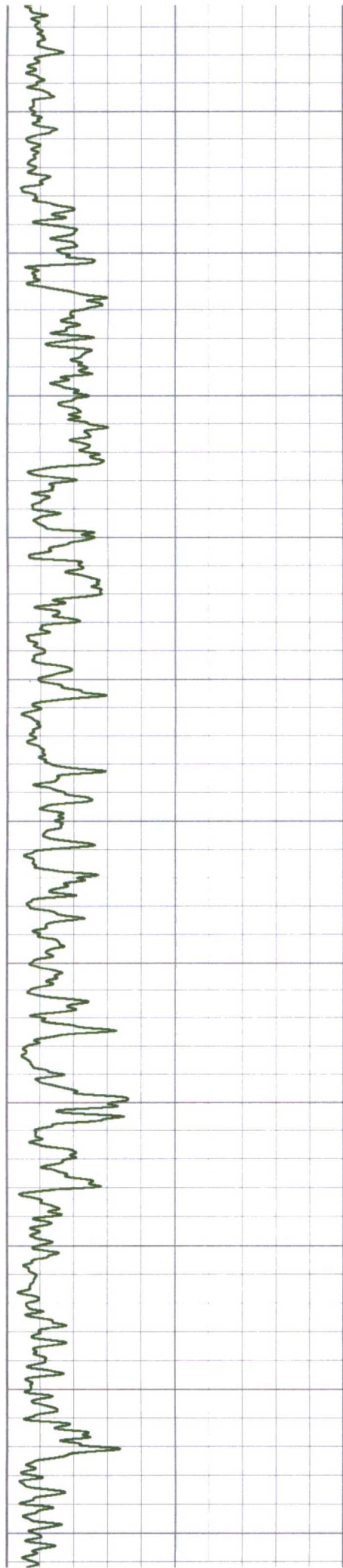
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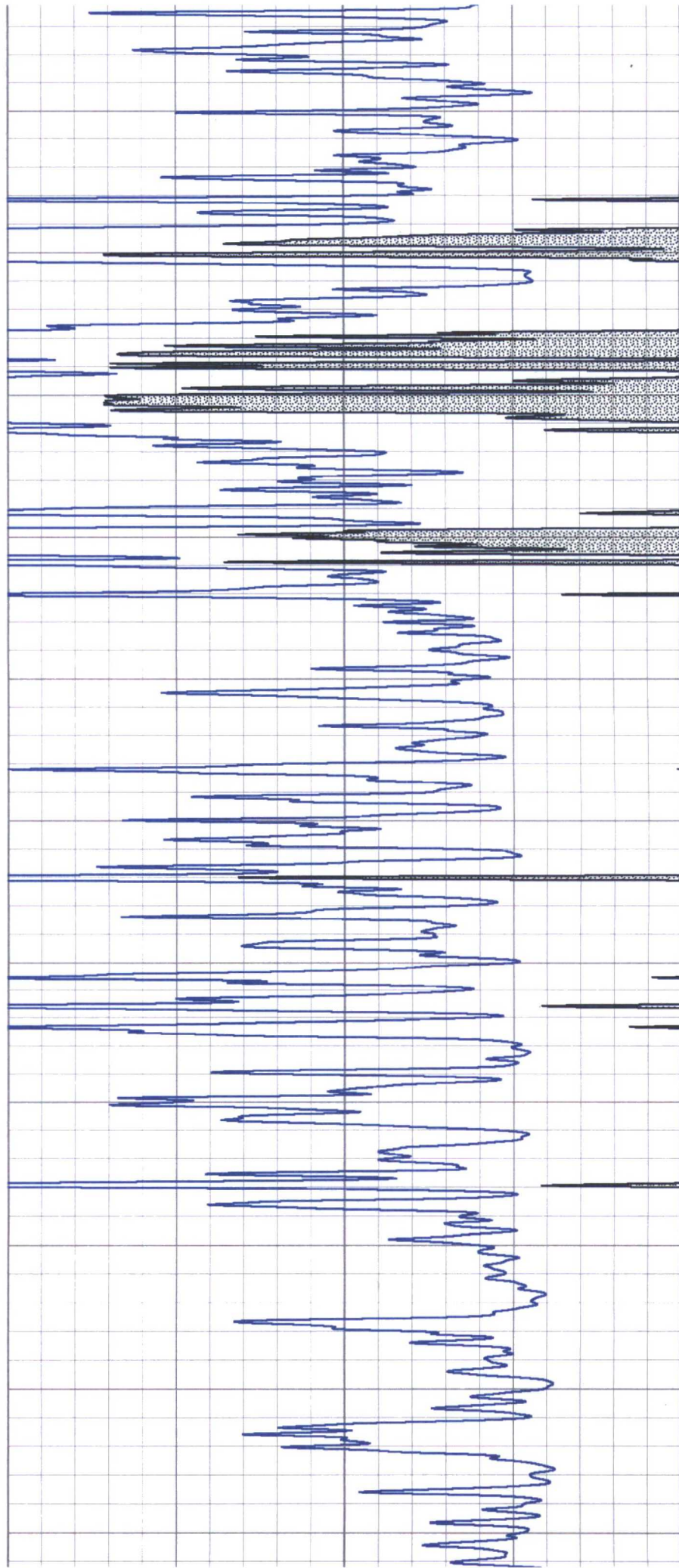
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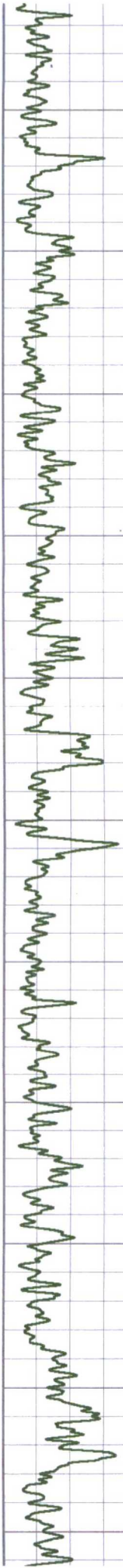
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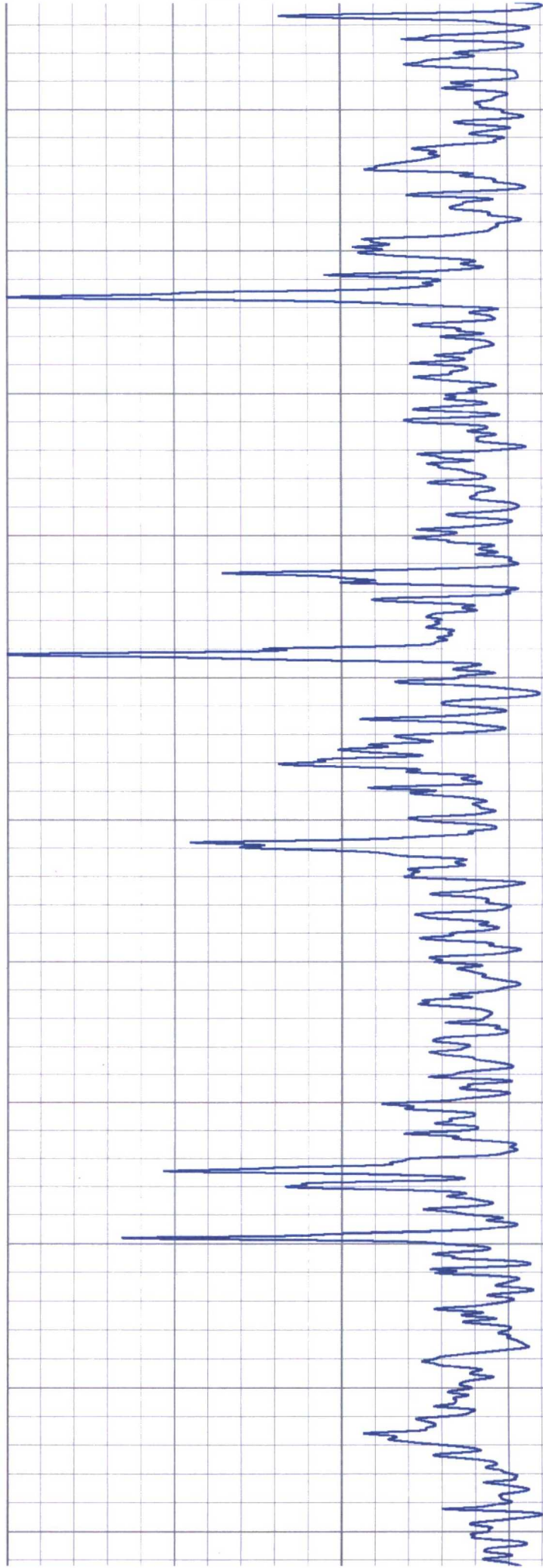
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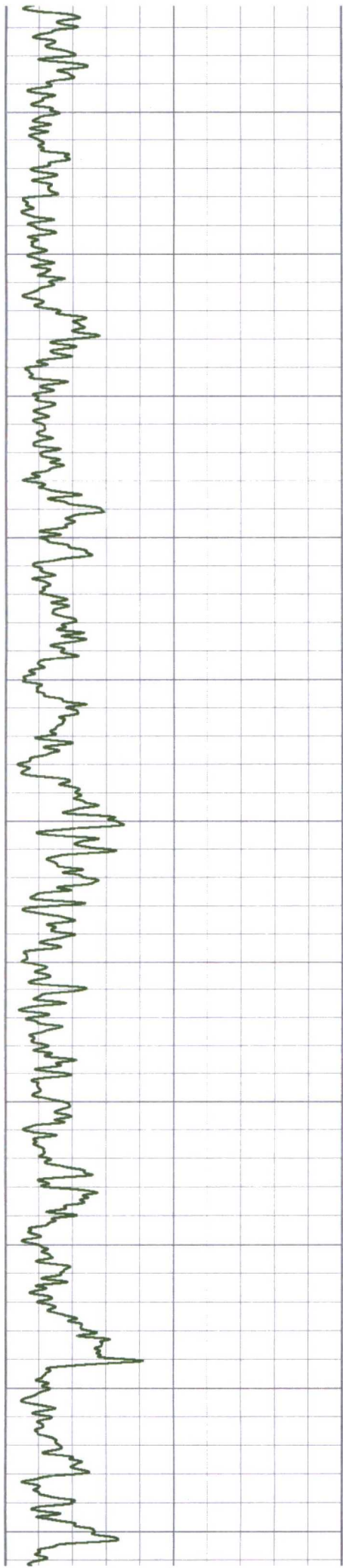
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2700
2800
2900
3000
3100
3200





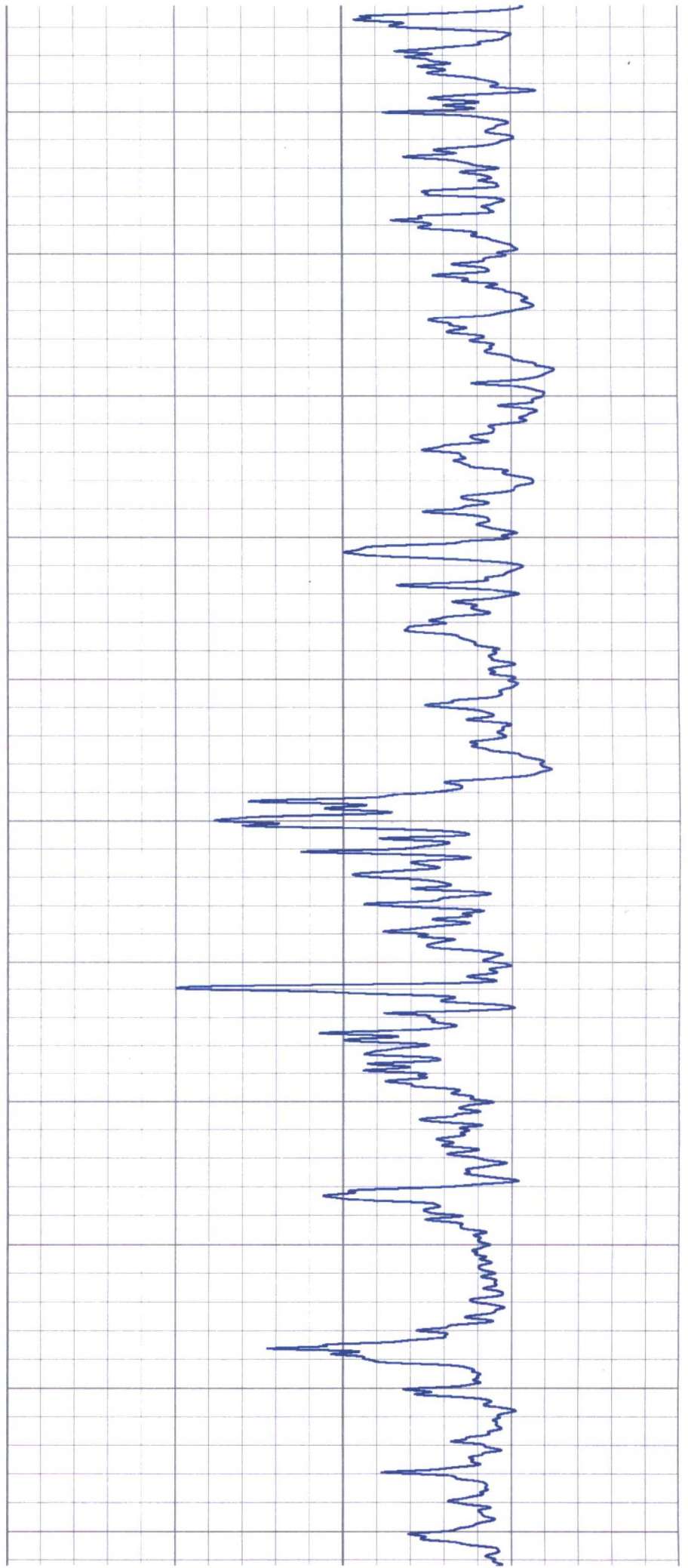
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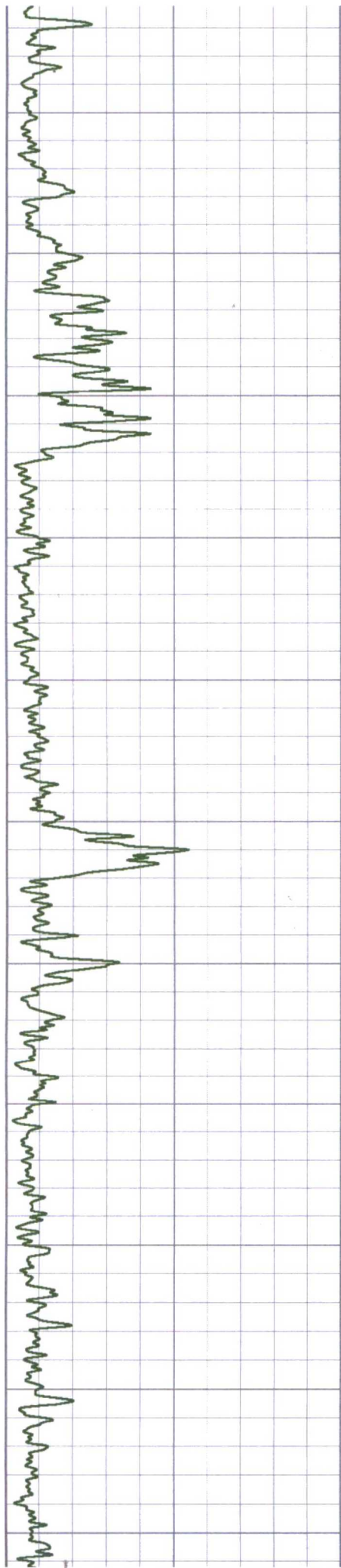
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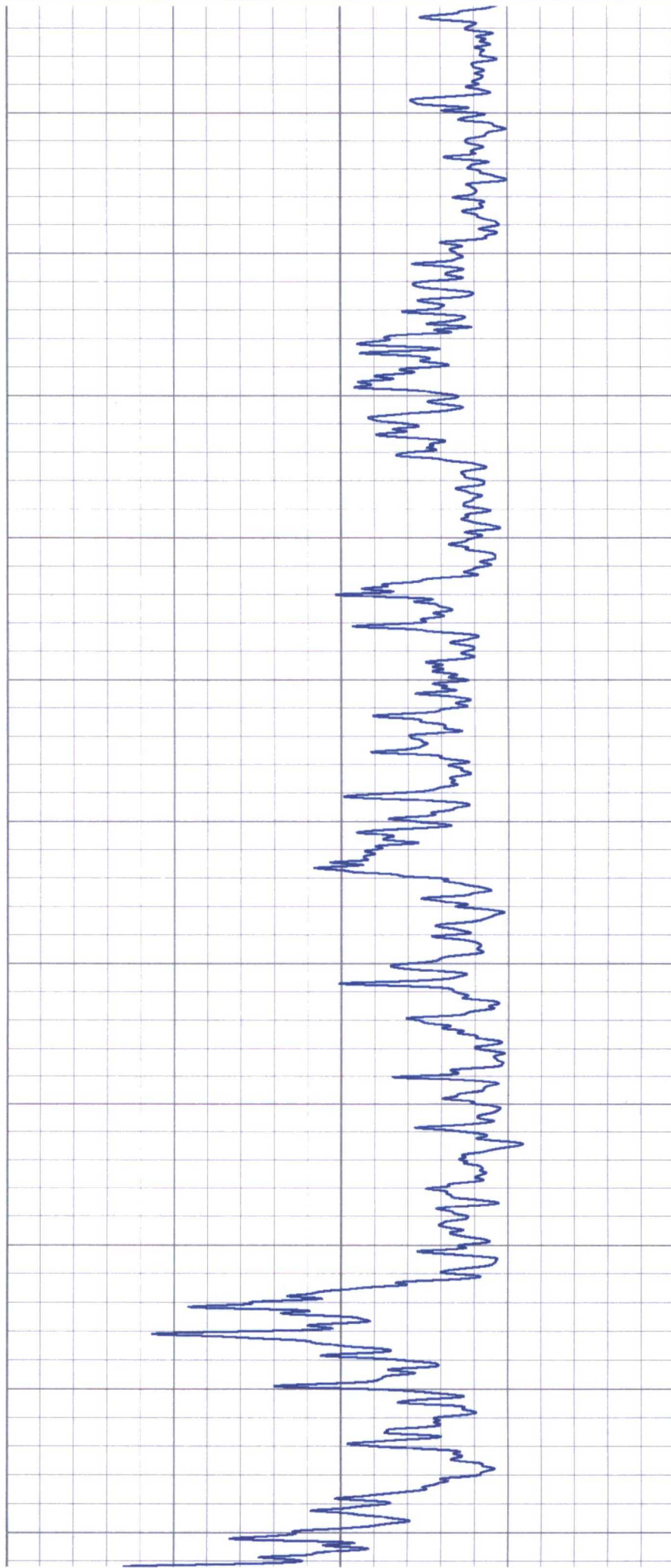
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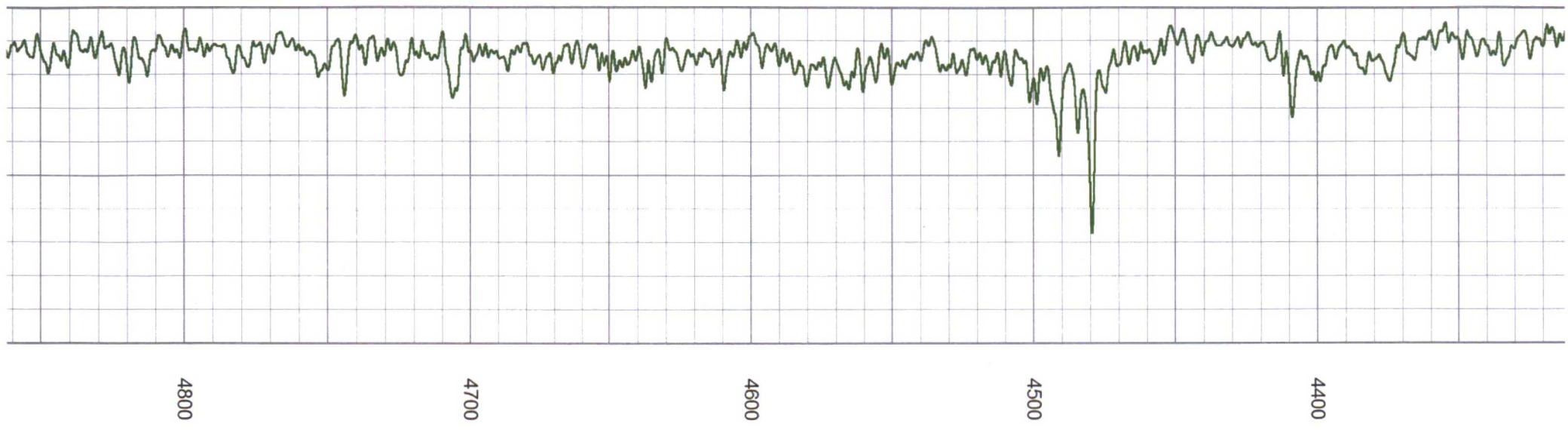
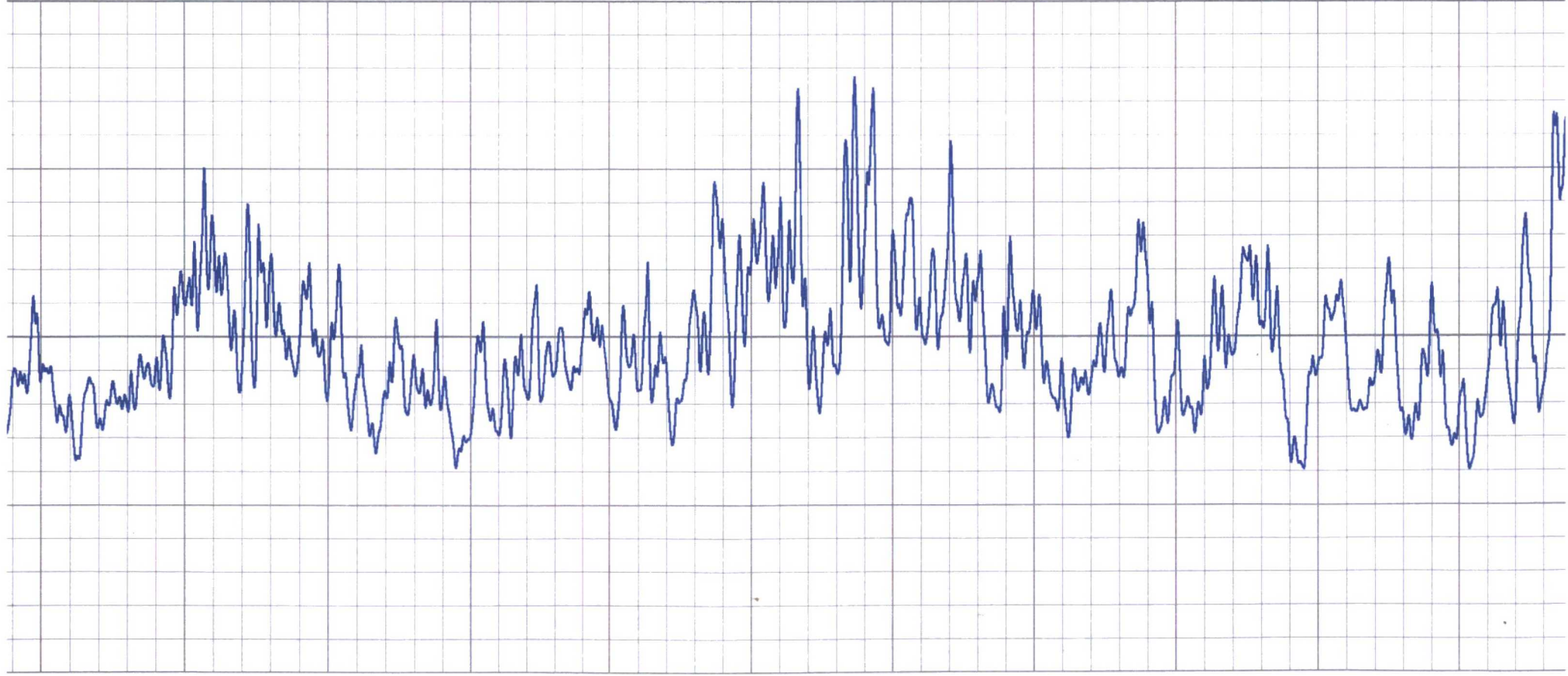
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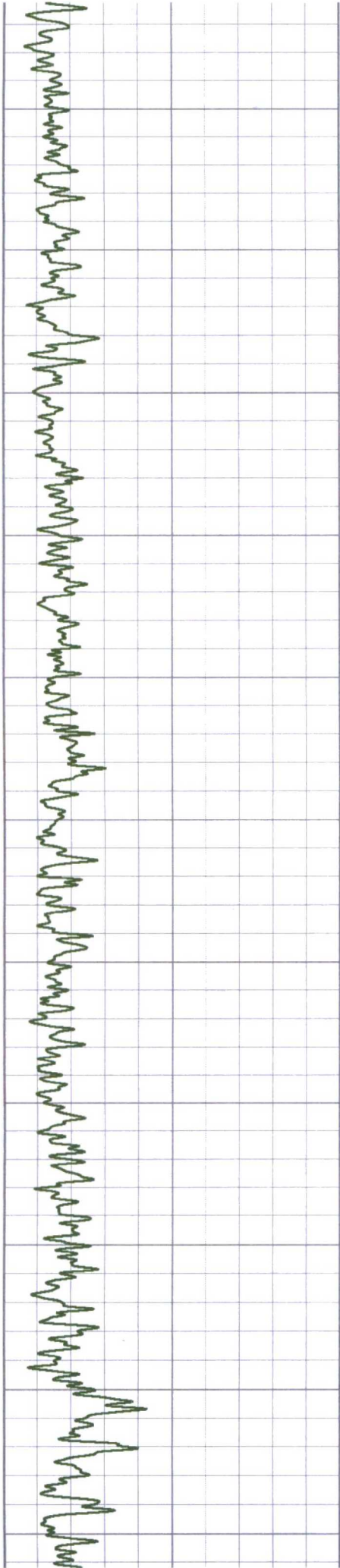
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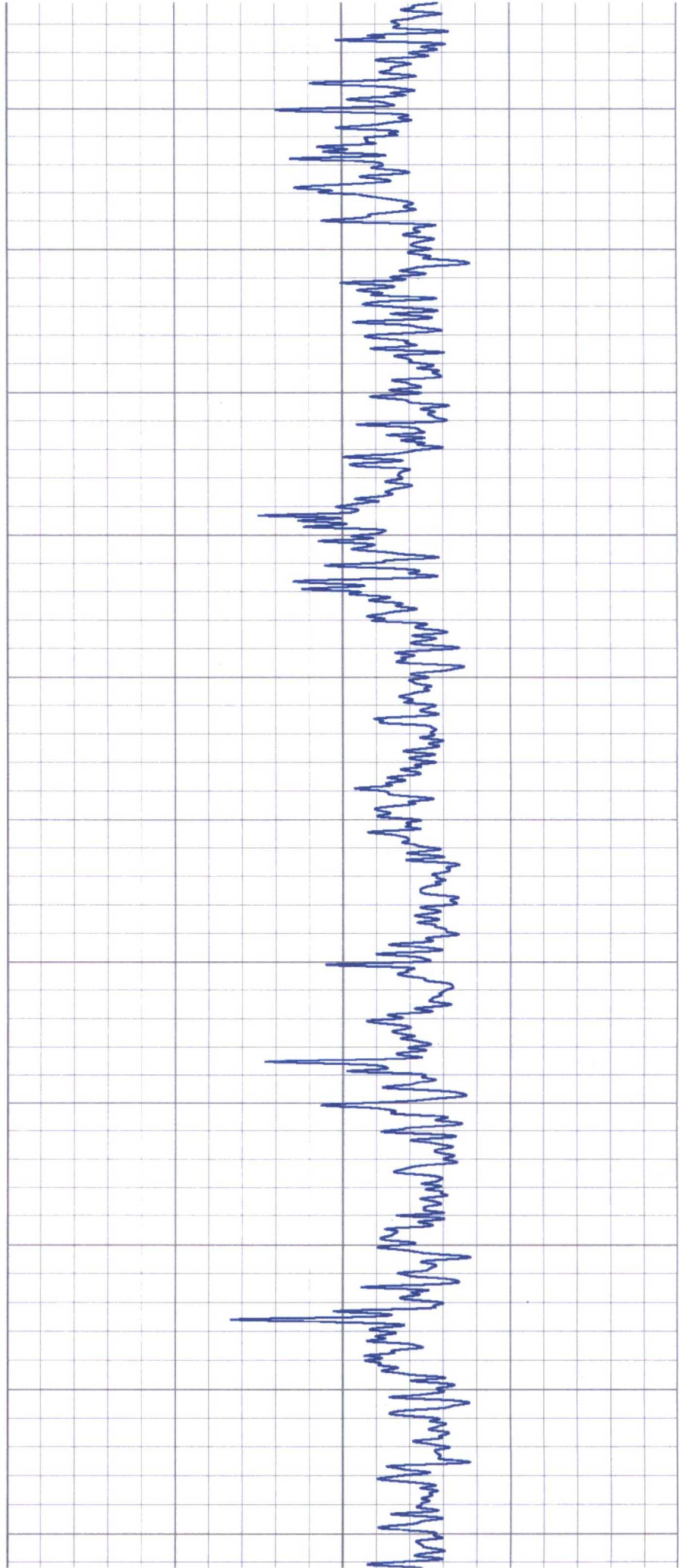
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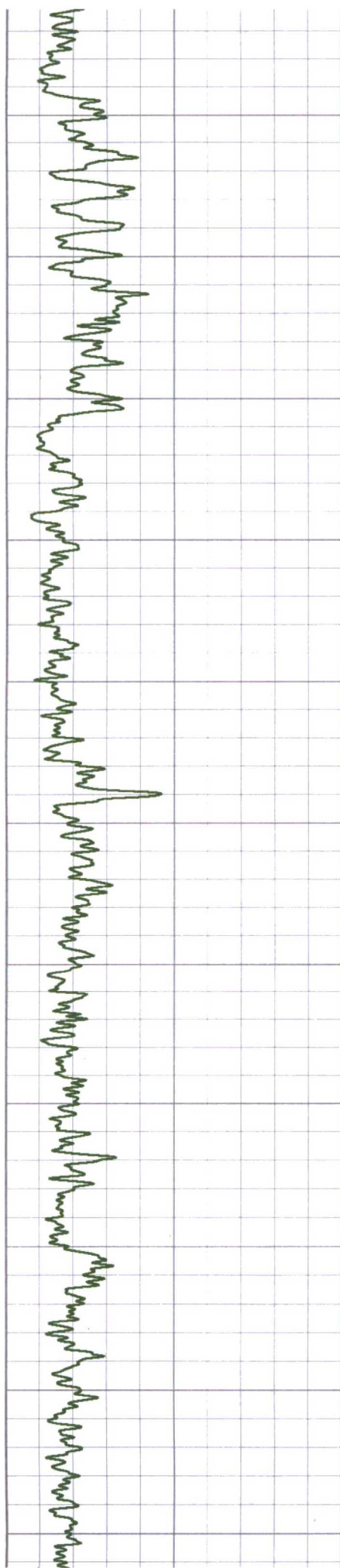






4900
5000
5100
5200
5300
5400





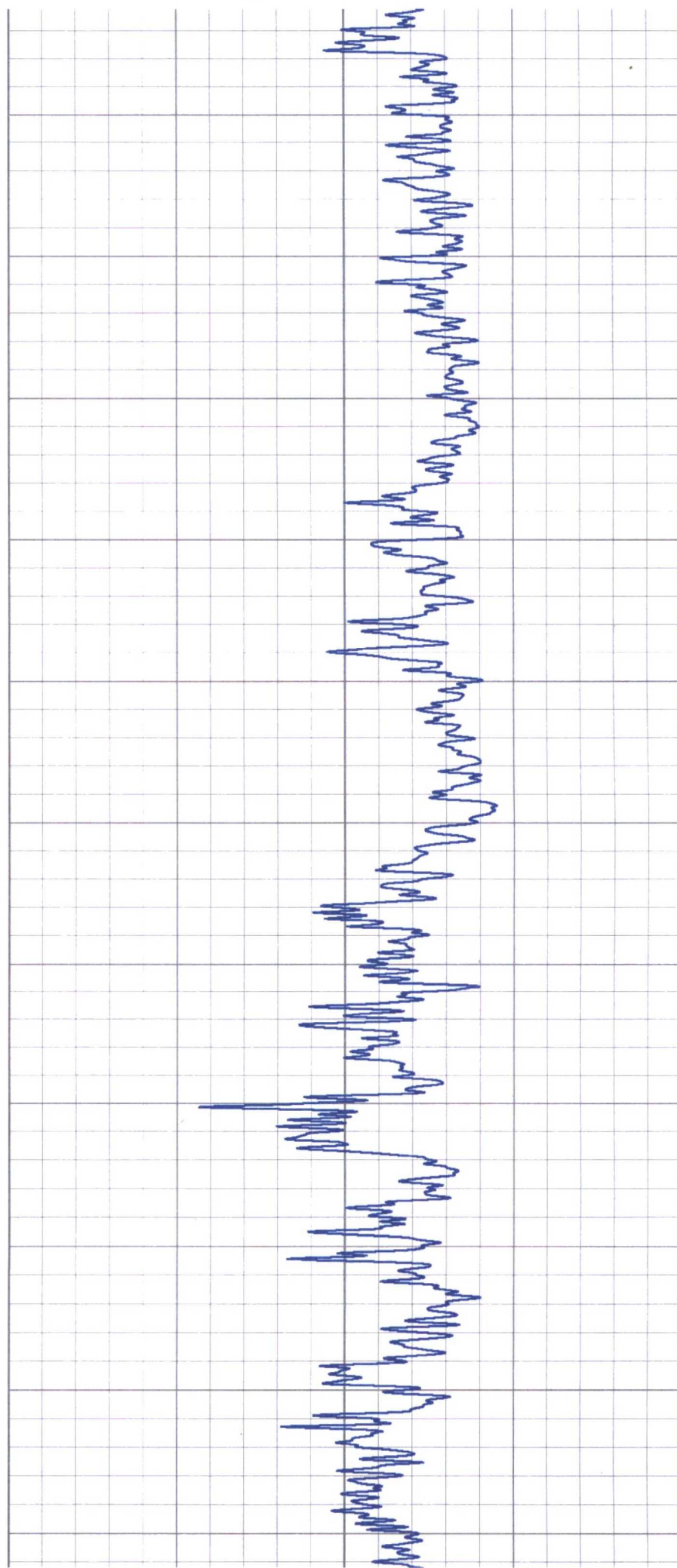
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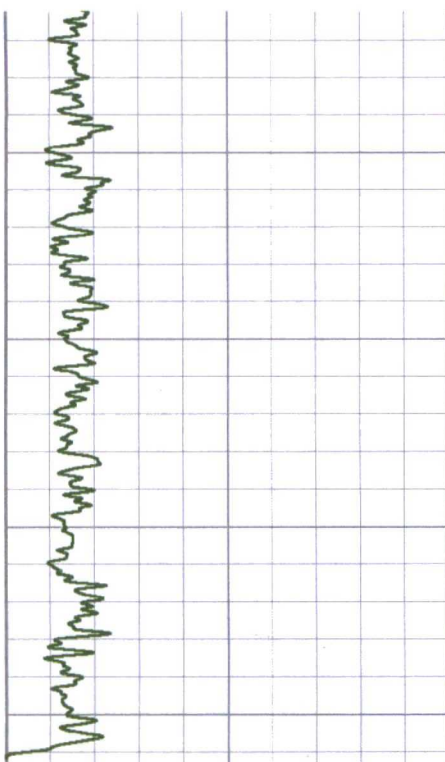
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5700

5800

5900

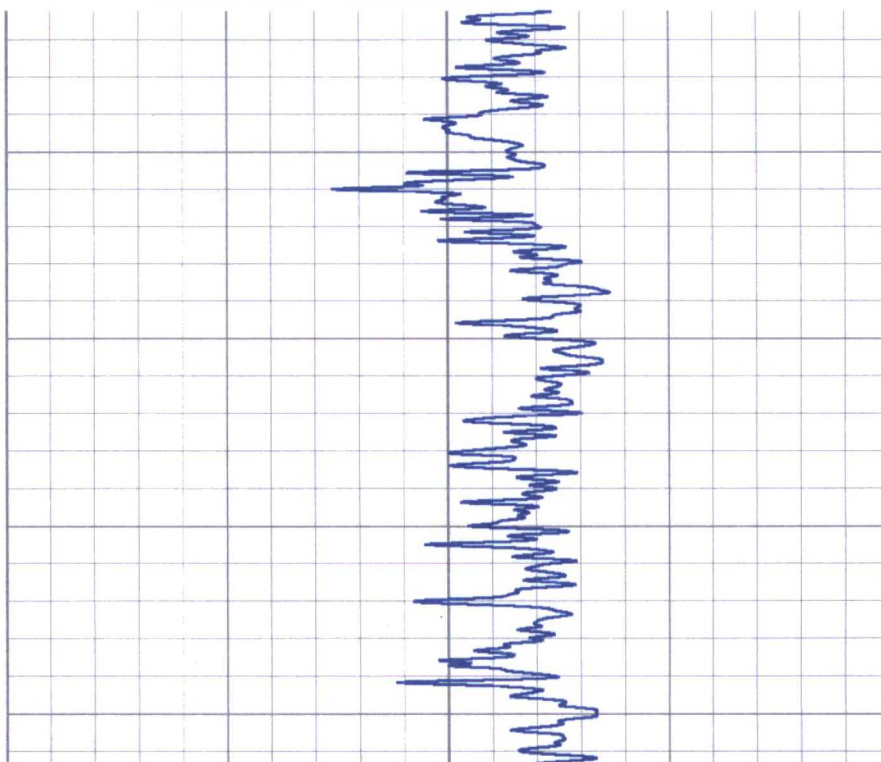




0 Gamma Ray (GAPI) 150

6000

6100



Neutron Porosity
Limestone Matrix

30

(pu)

-10



Main Pass



Main Pass

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 Dataset Pathname: main
 Presentation Format: cnlspray
 Dataset Creation: Thu Mar 16 14:30:54 2017 by Calc 7.0 B1
 Charted by: Depth in Feet scaled 1:240

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9 Casing Collar -1

0 Line Tension (lb) 5000

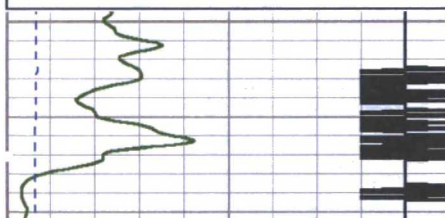
Neutron Porosity
Limestone Matrix

30

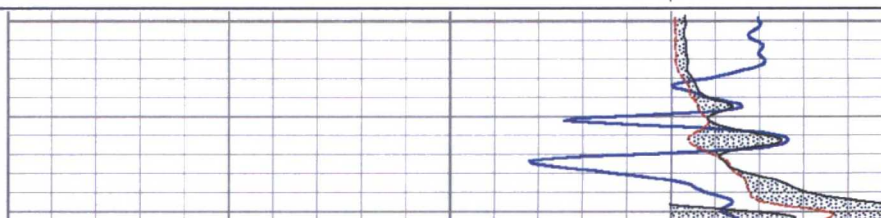
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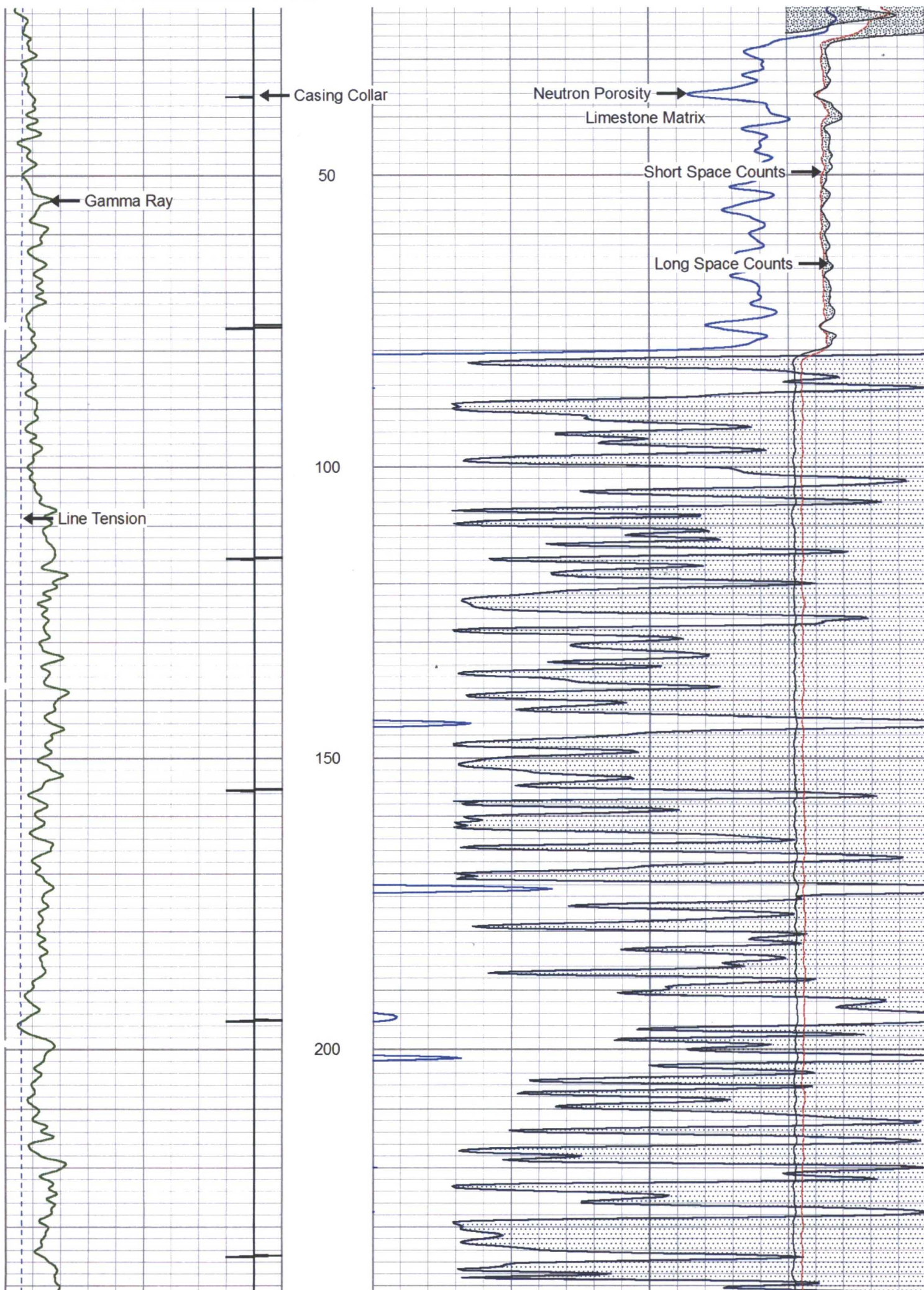
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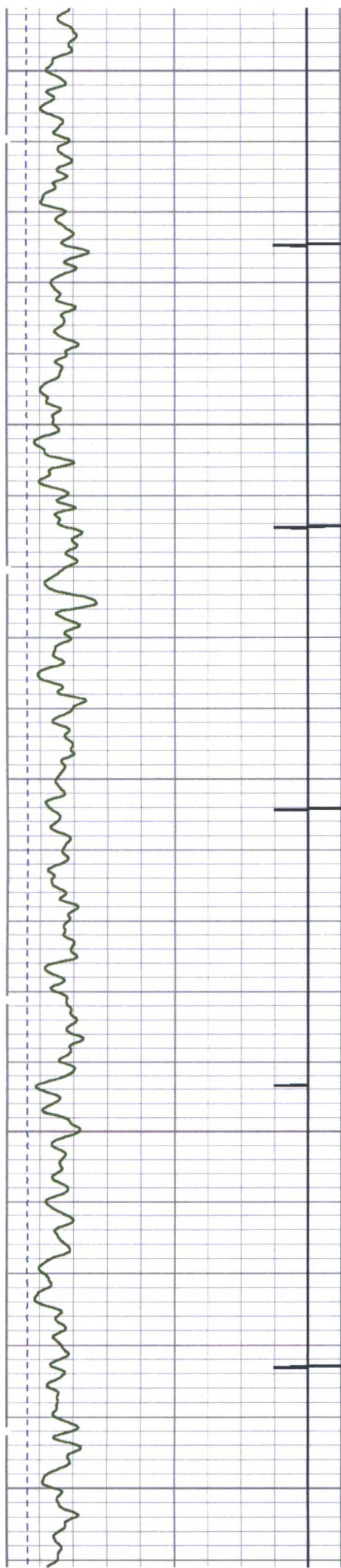
Long Space Counts
0 (cps) 1500
Short Space Counts
0 (cps) 7000



DEPTH







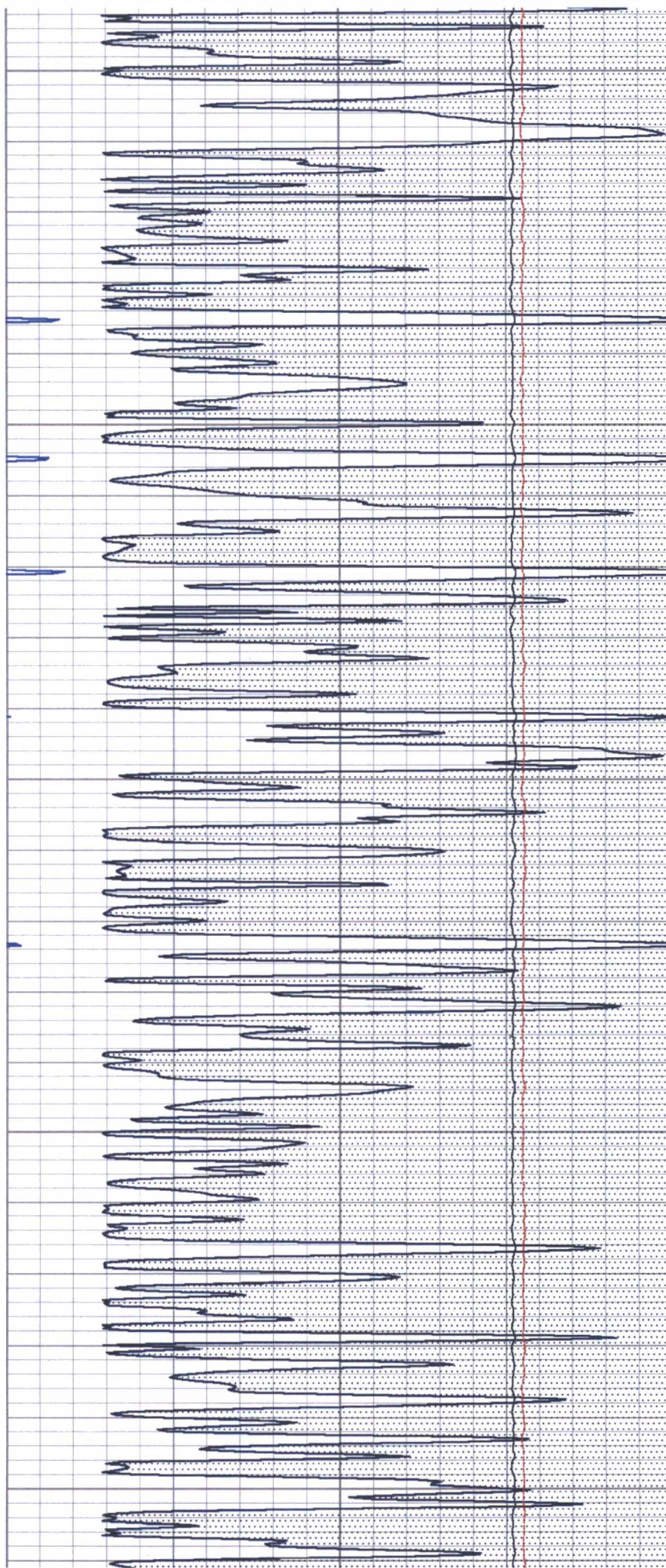
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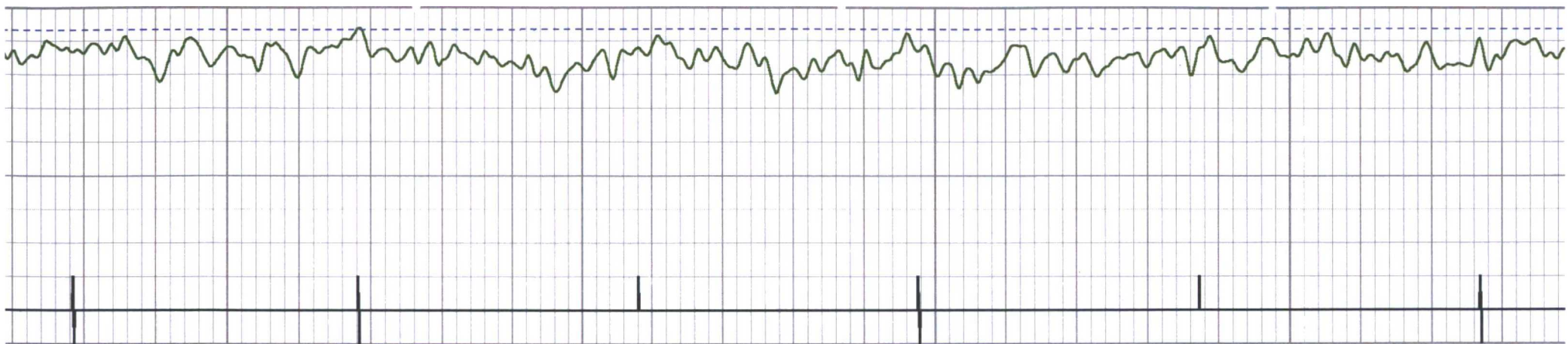
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350

400

450



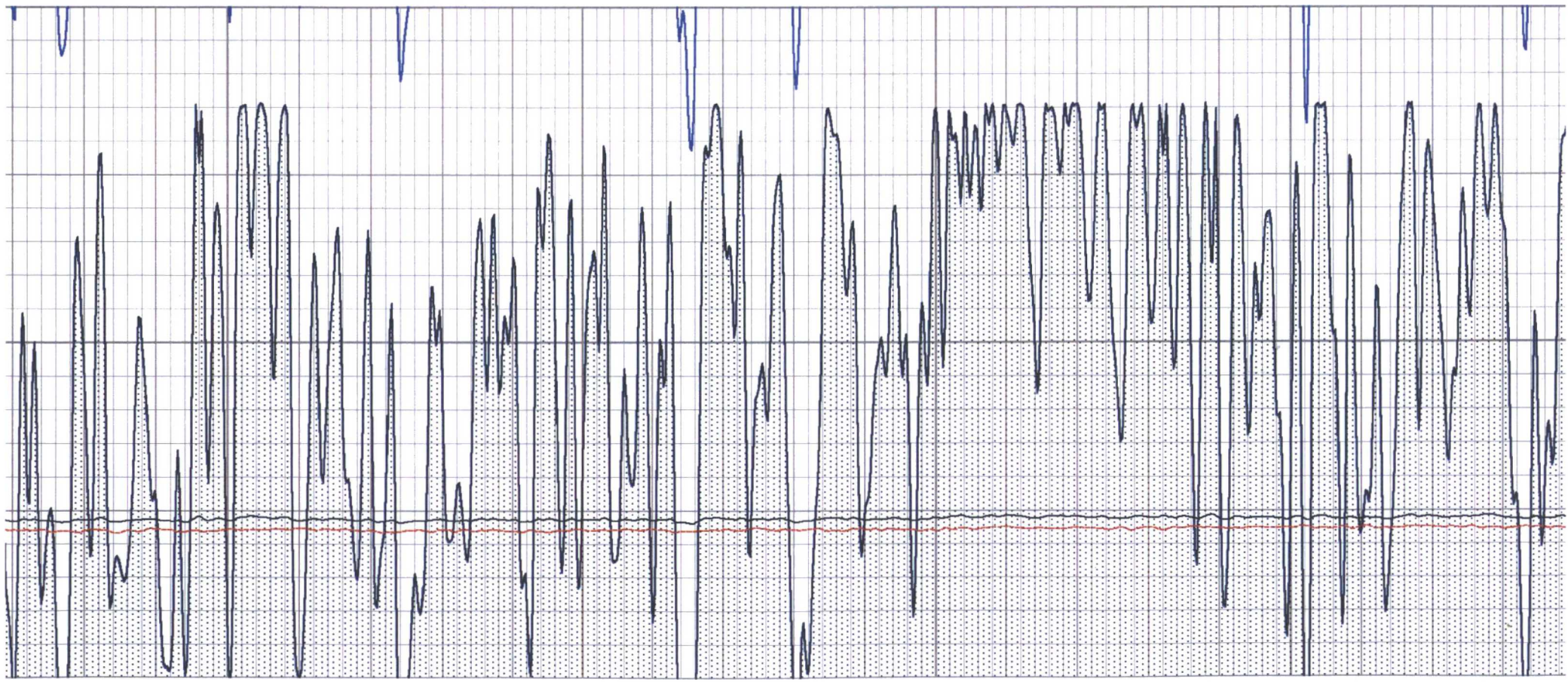


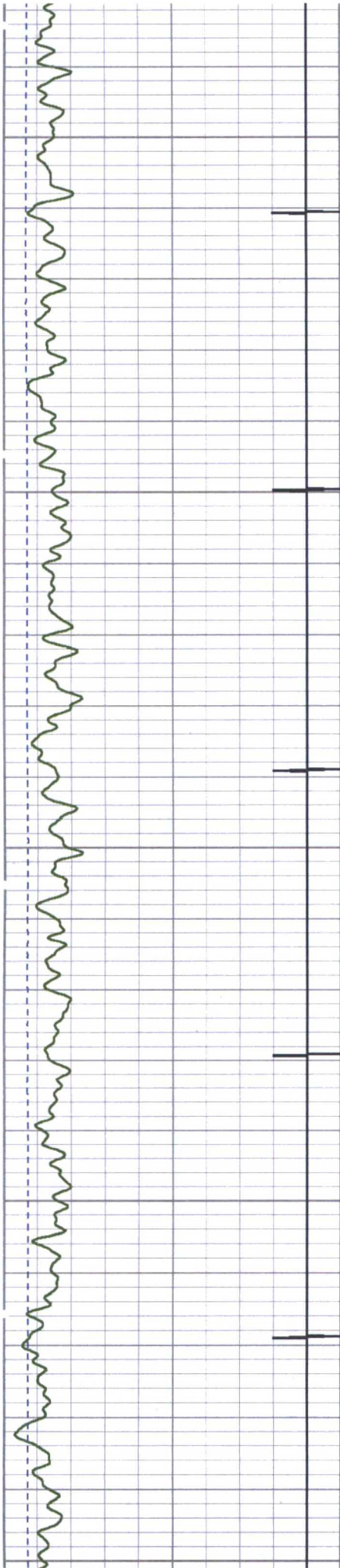
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600

550

500





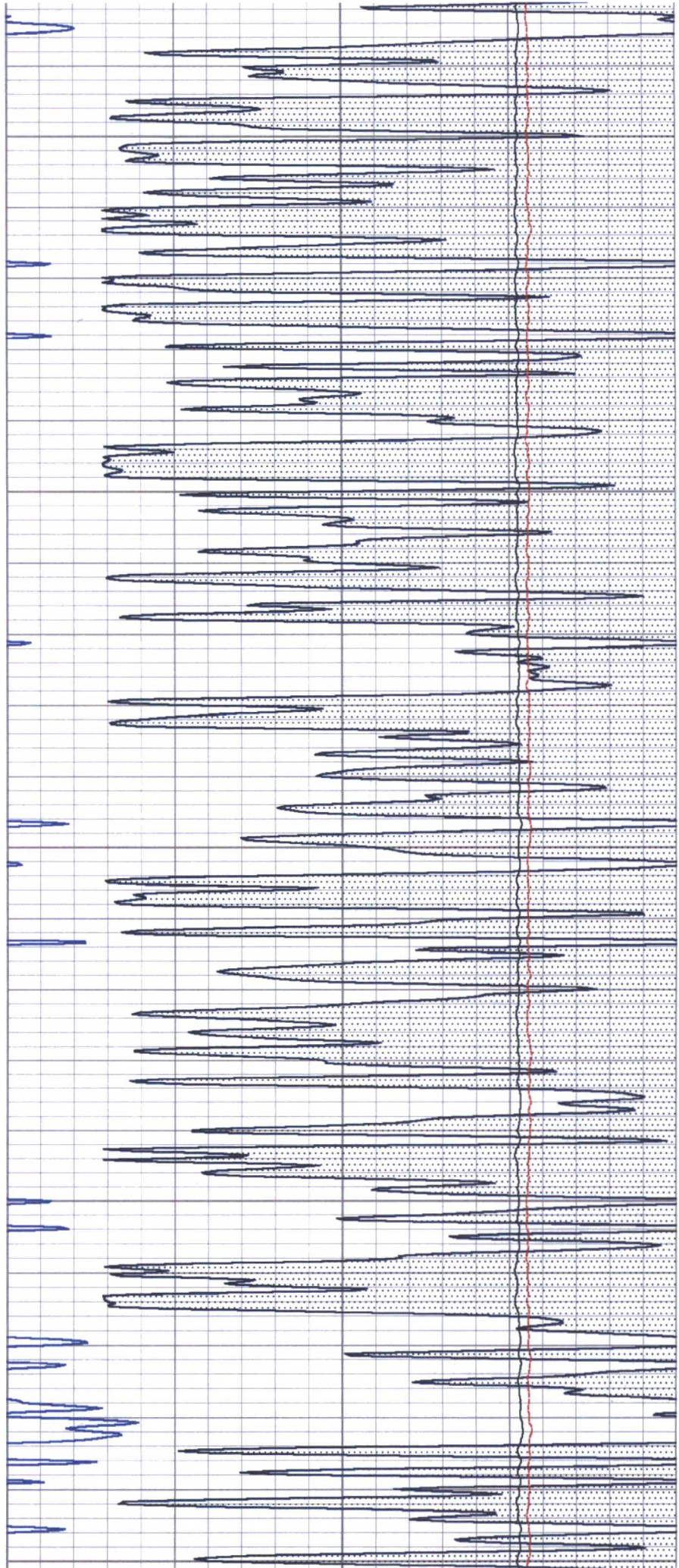
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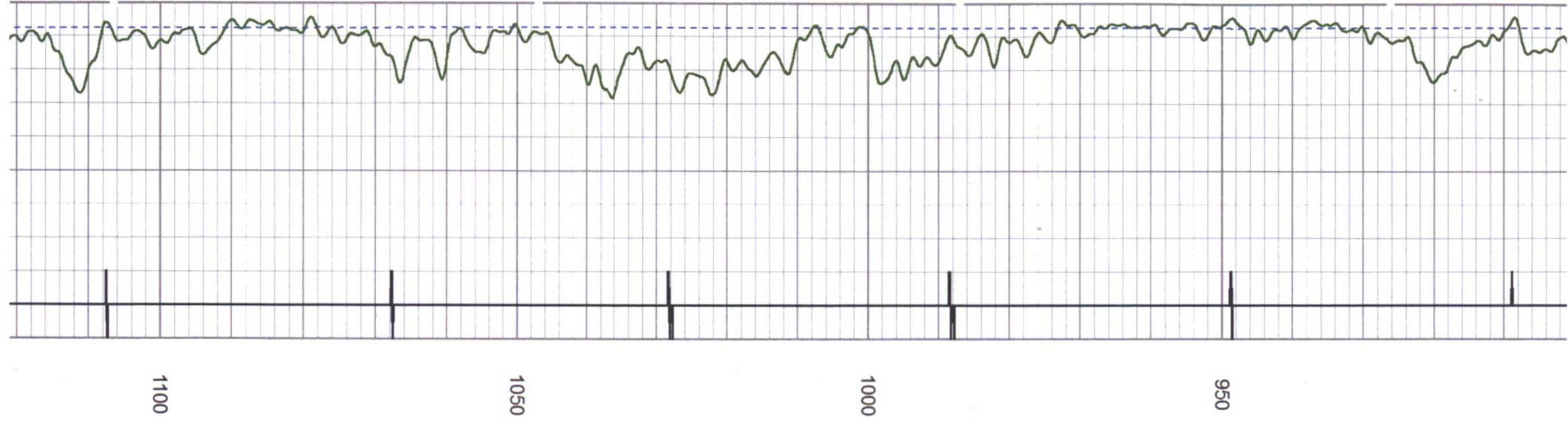
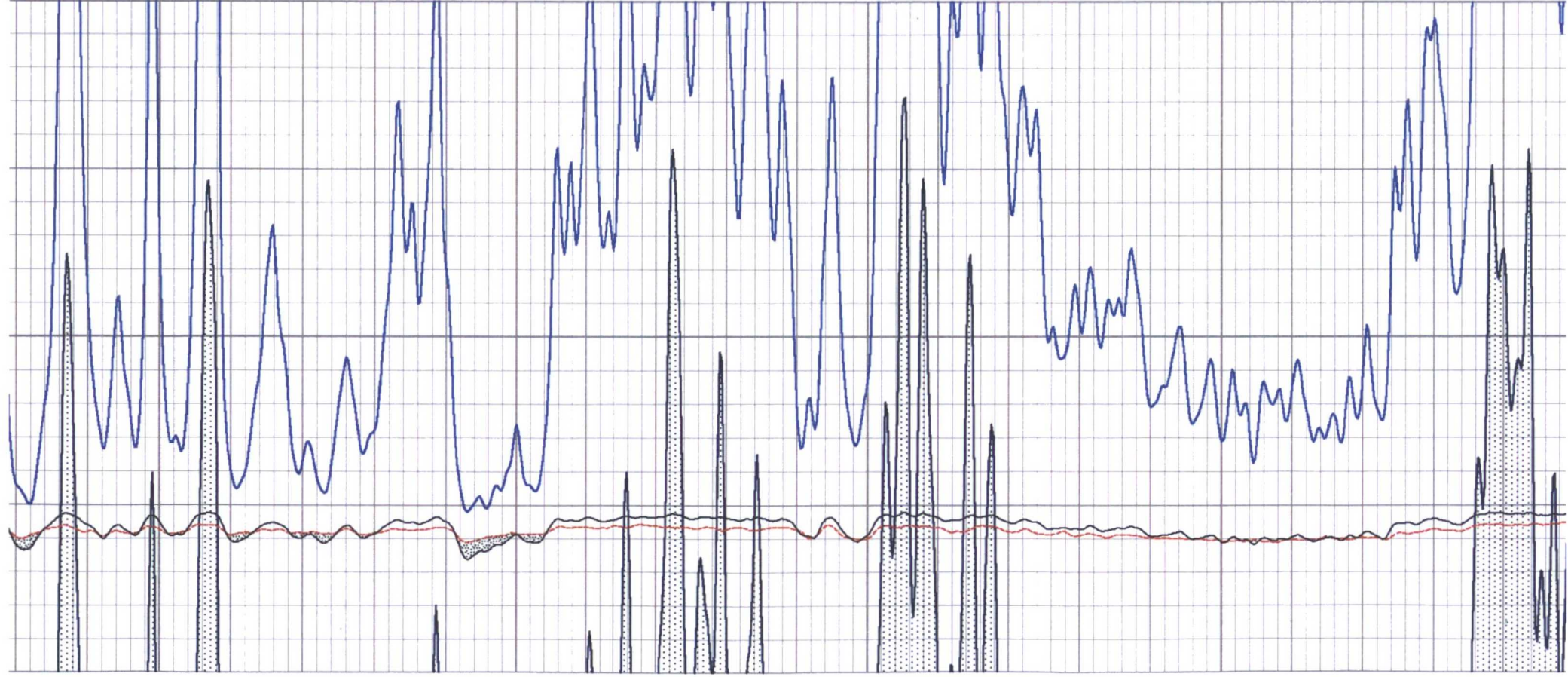
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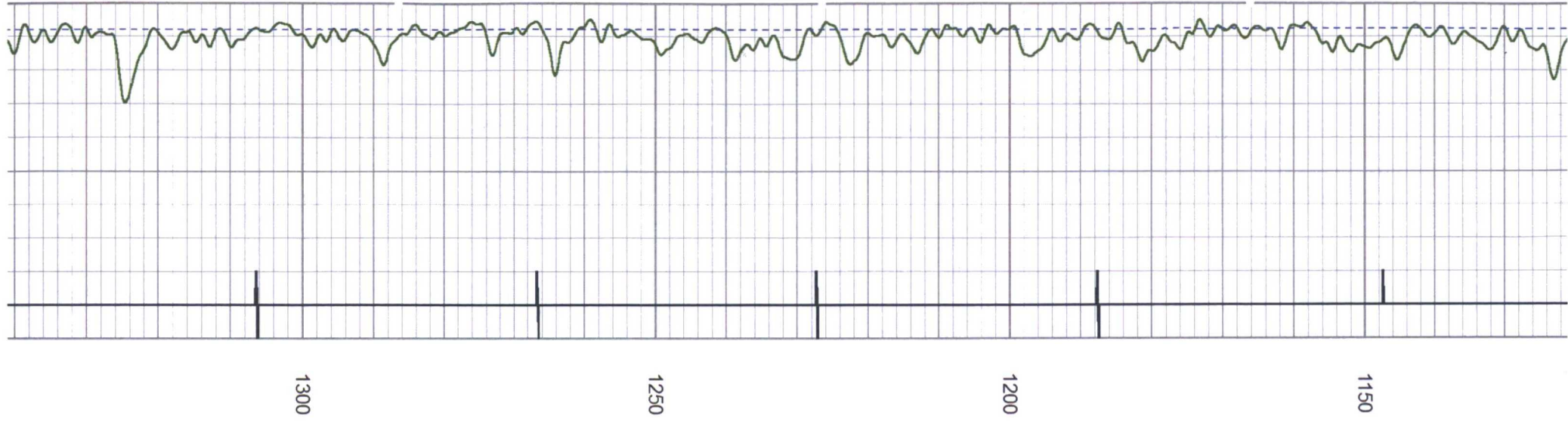
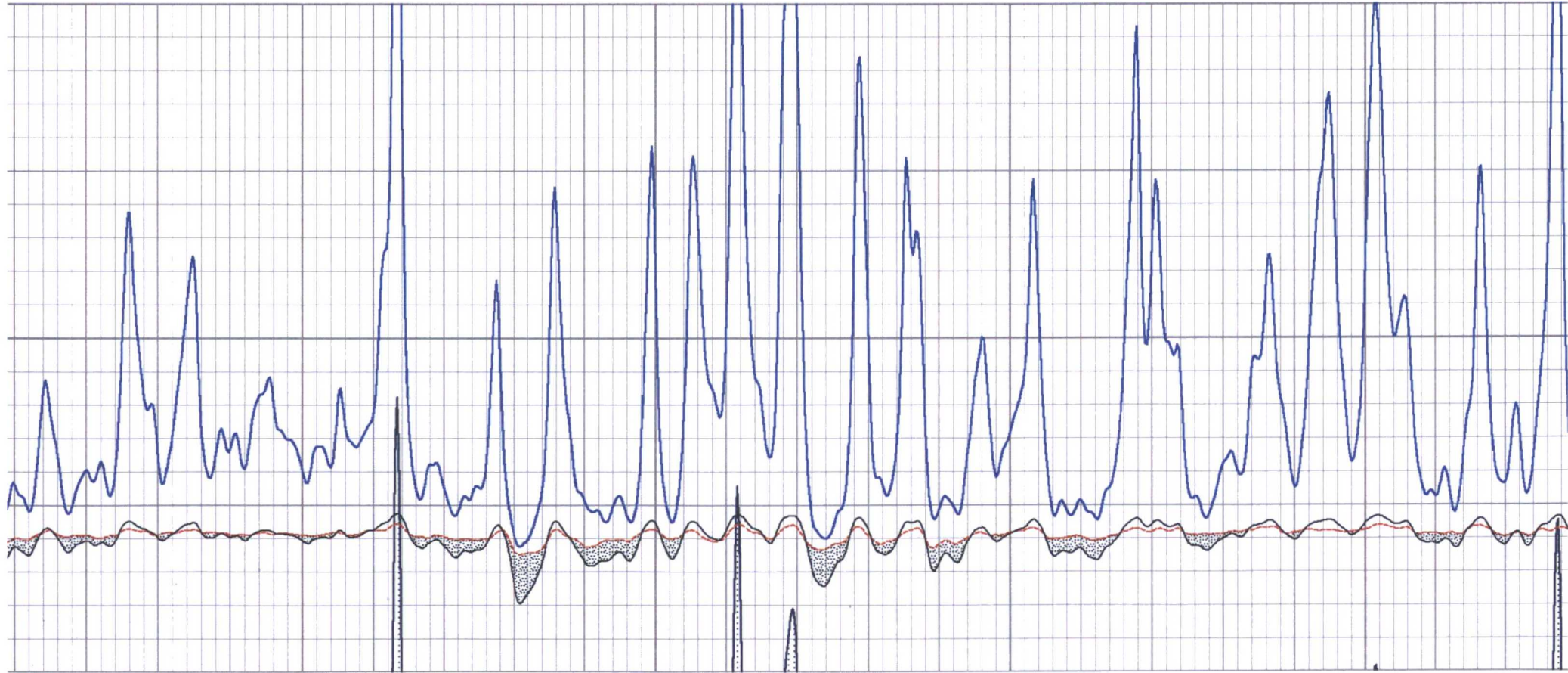
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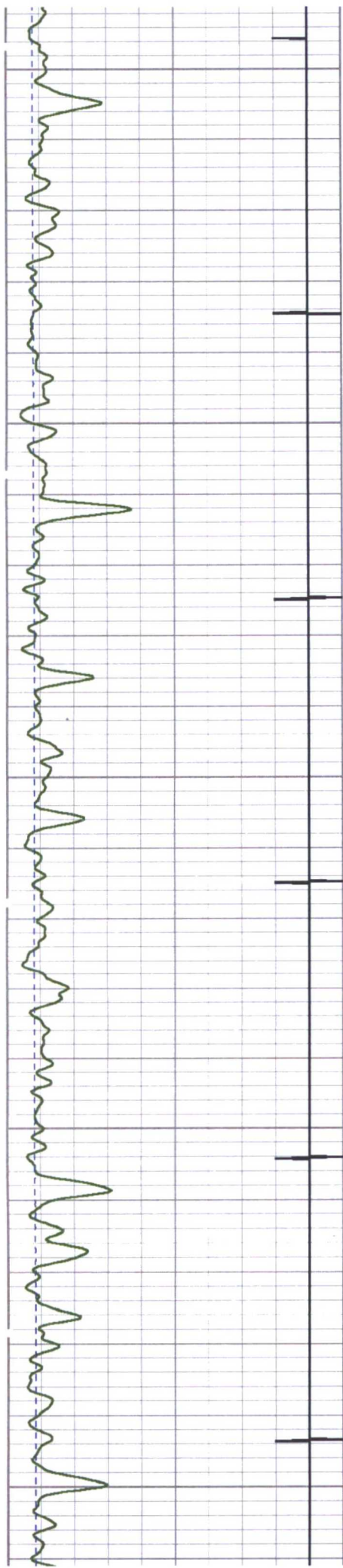
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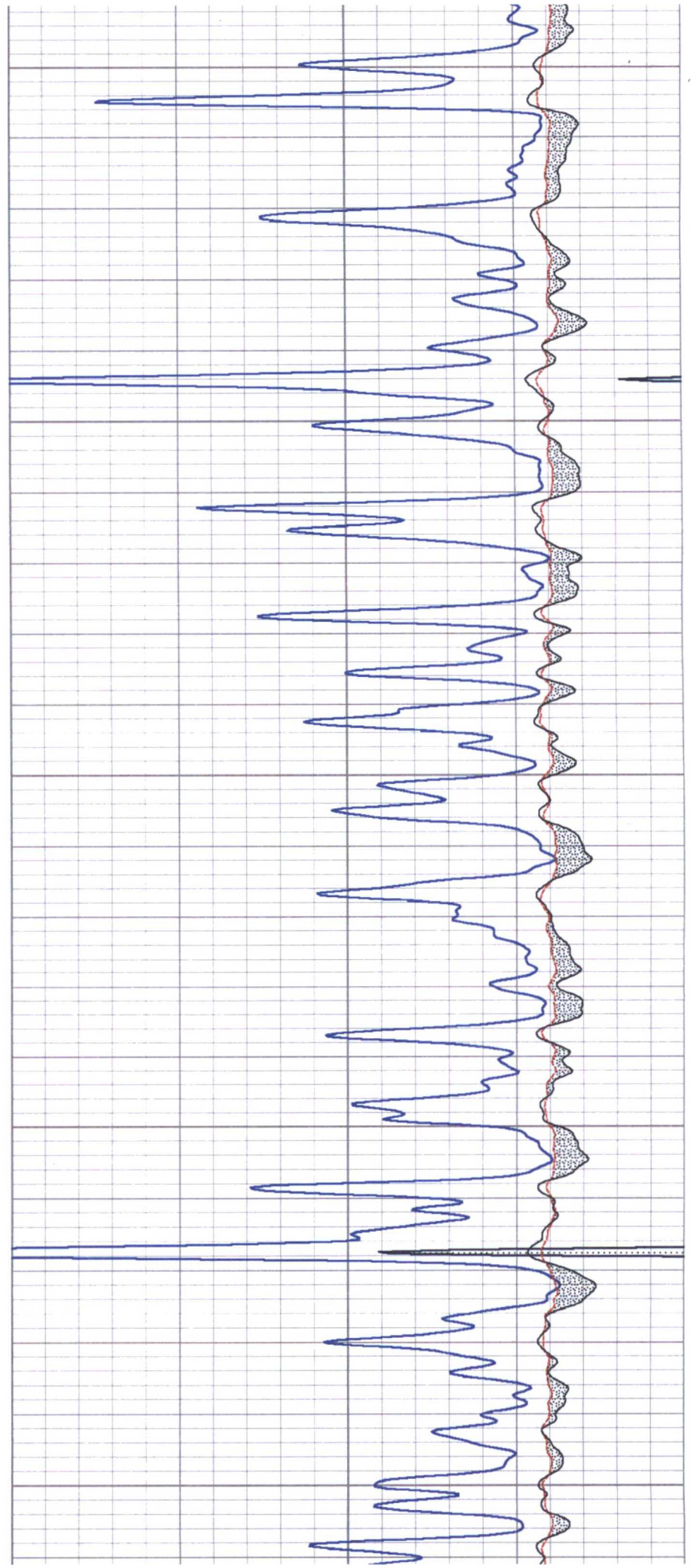
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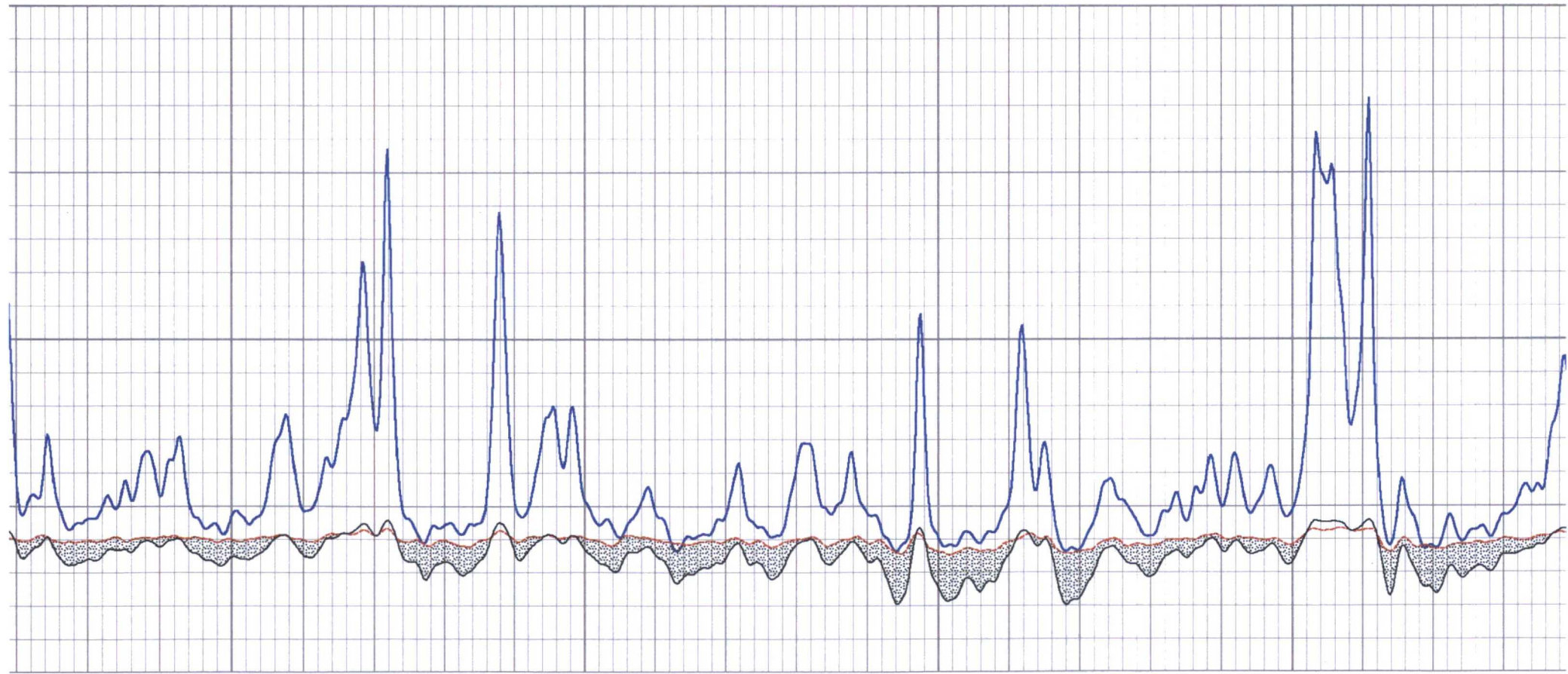
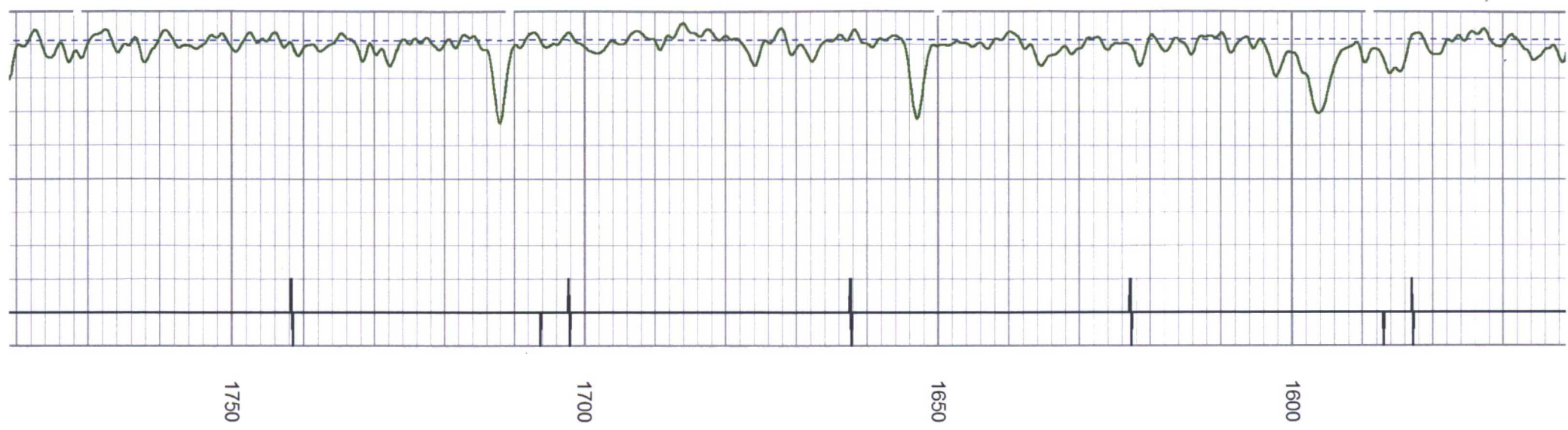
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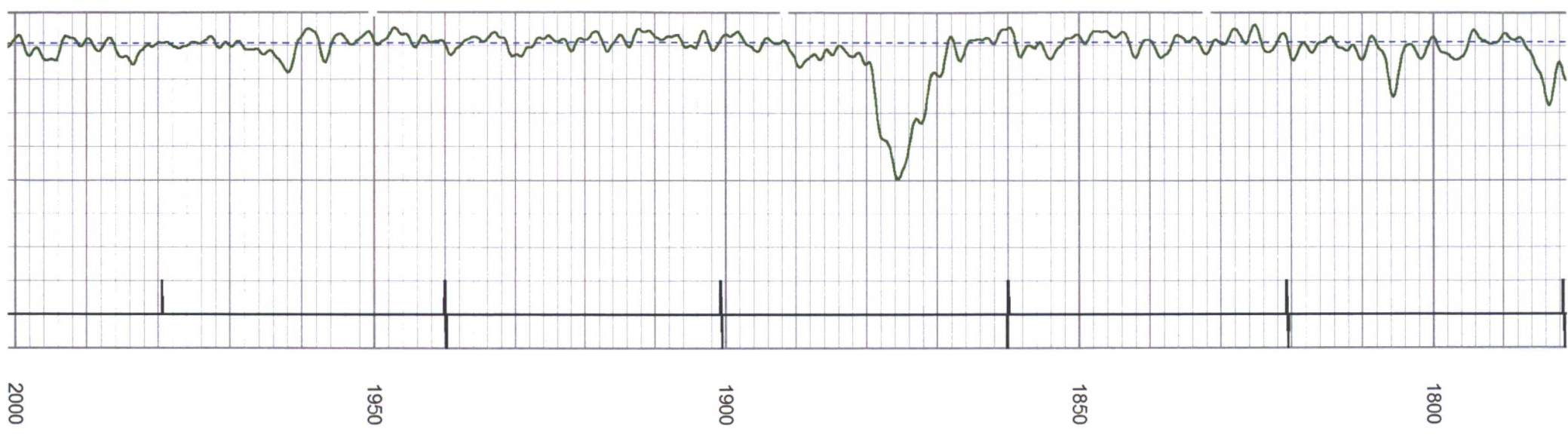
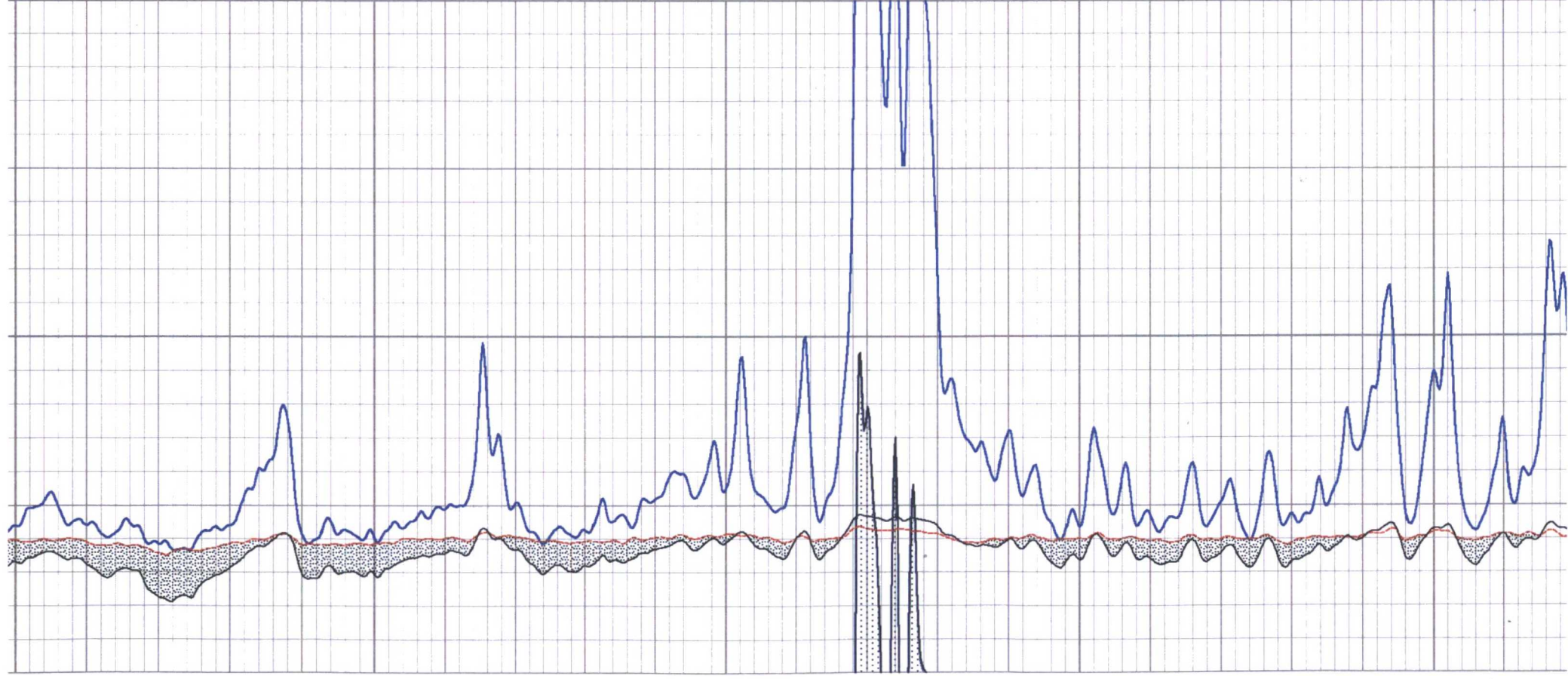
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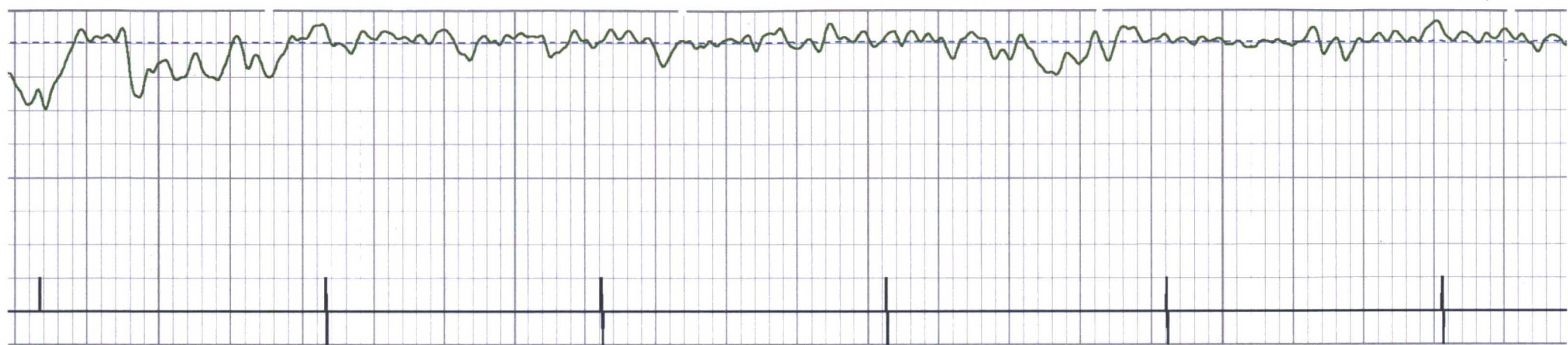
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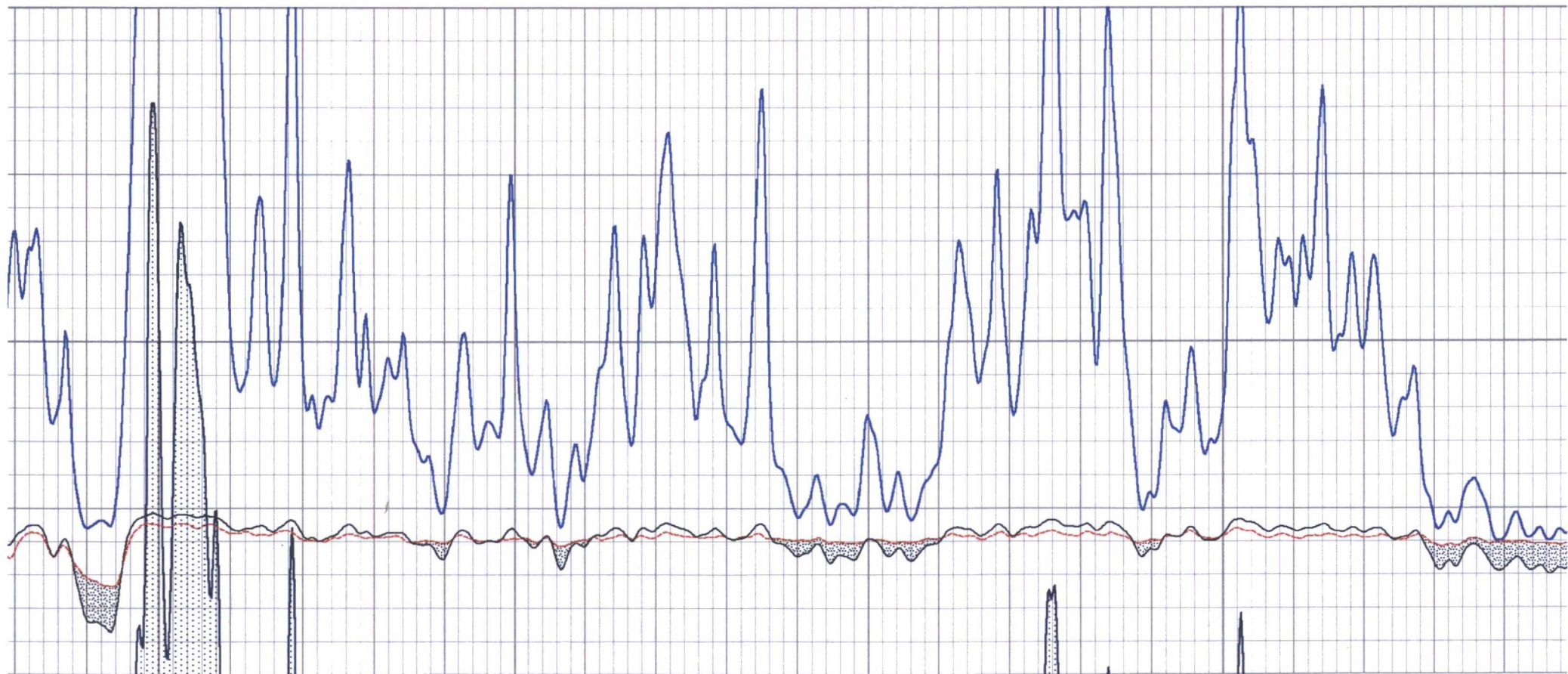


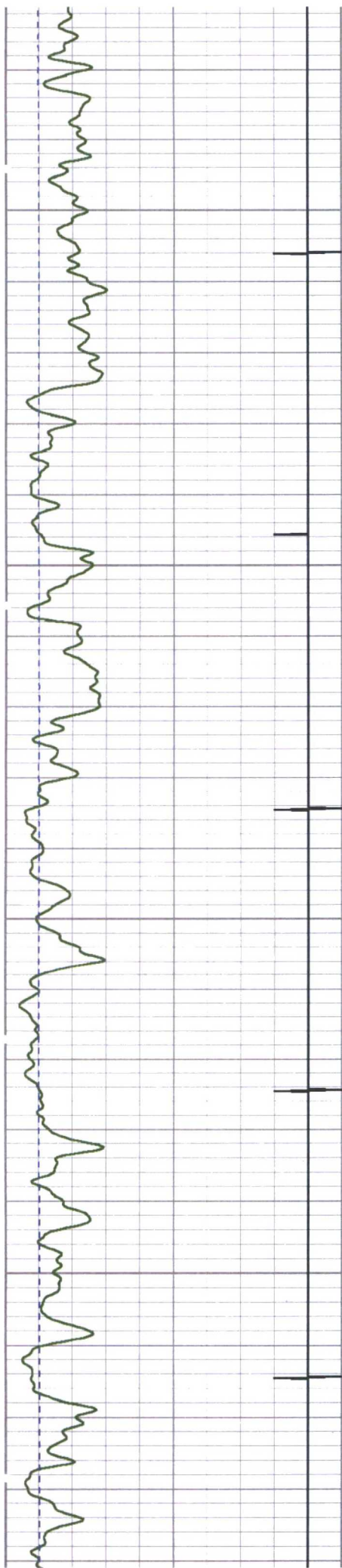
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2150

2100

2050



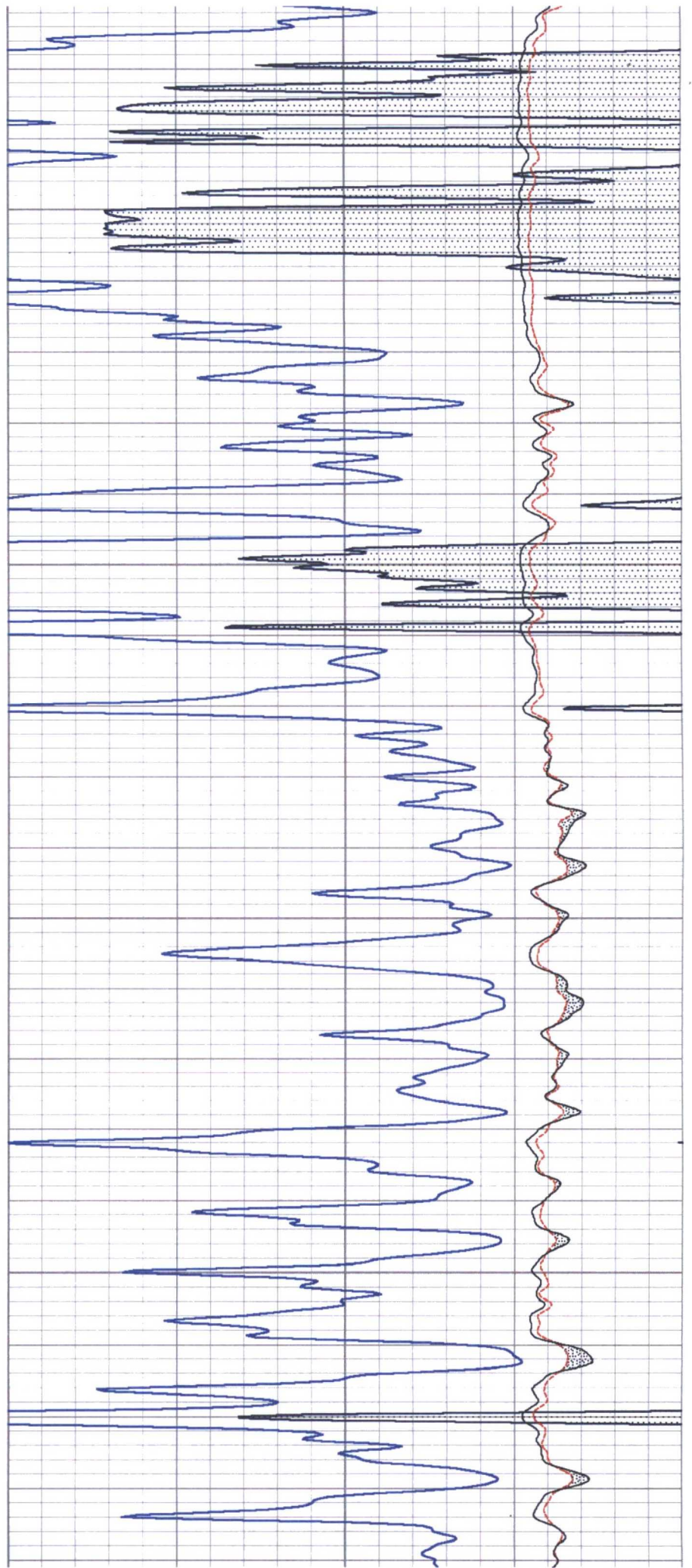


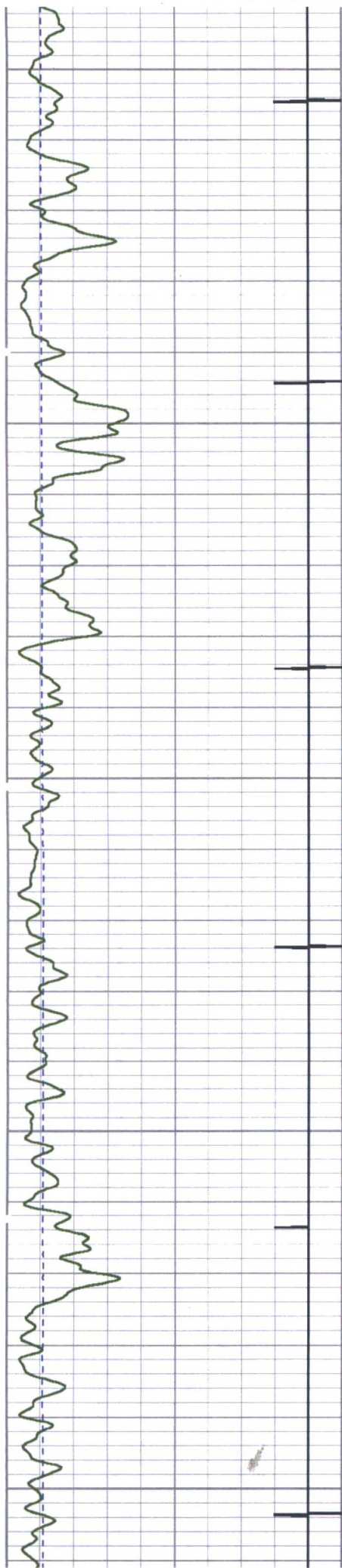
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2300

2350

2400





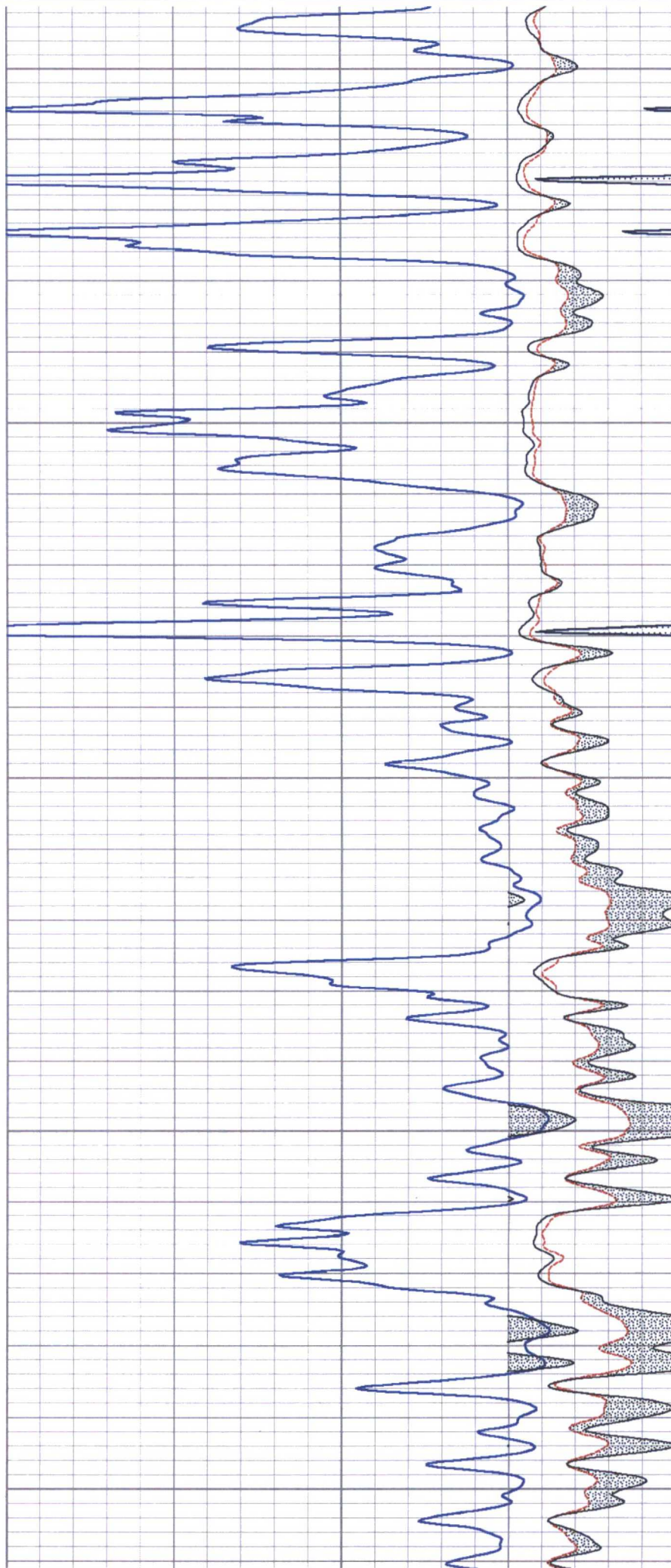
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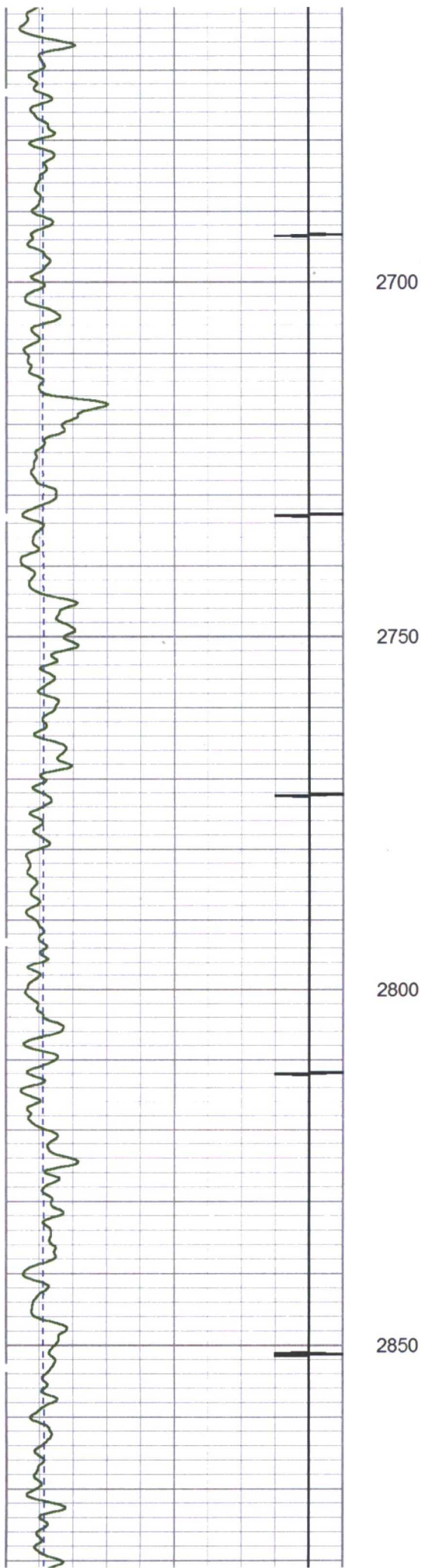
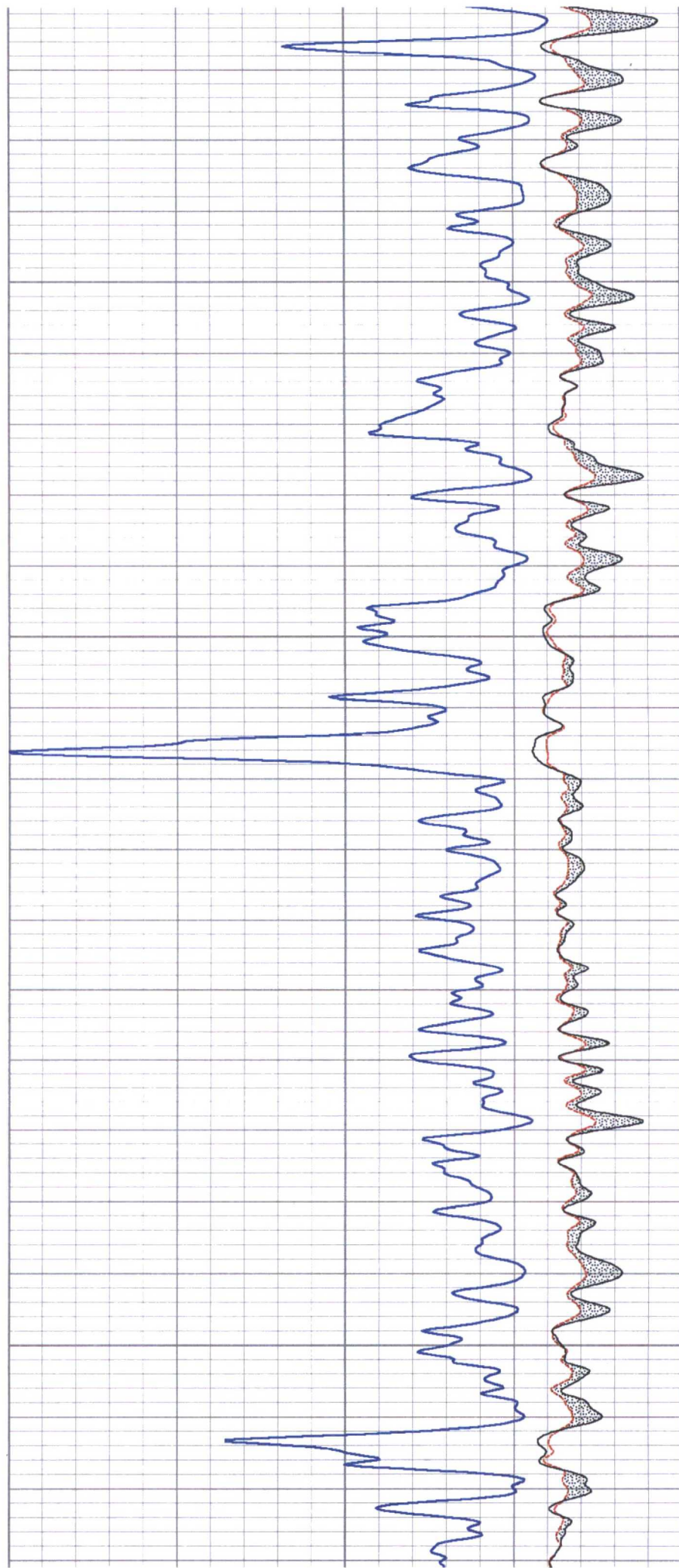
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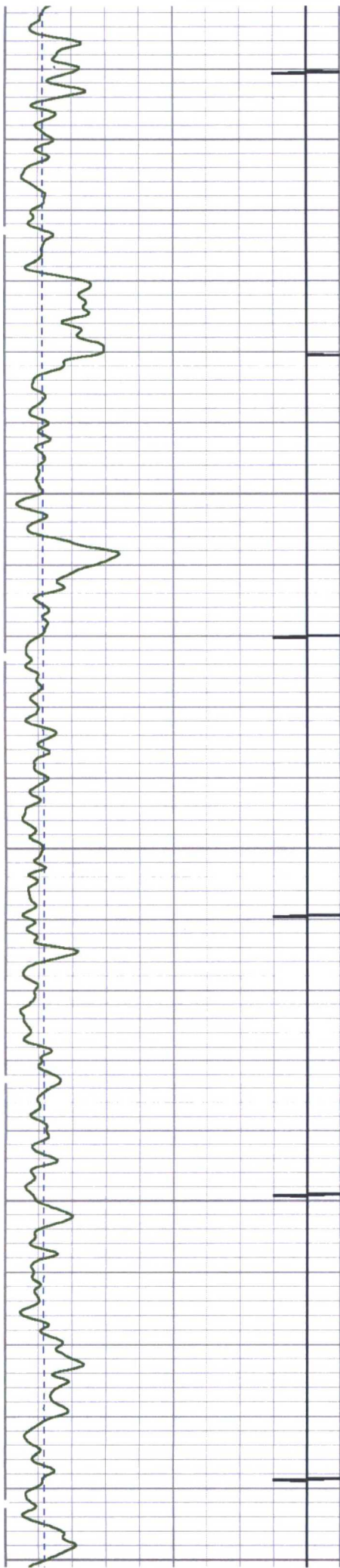
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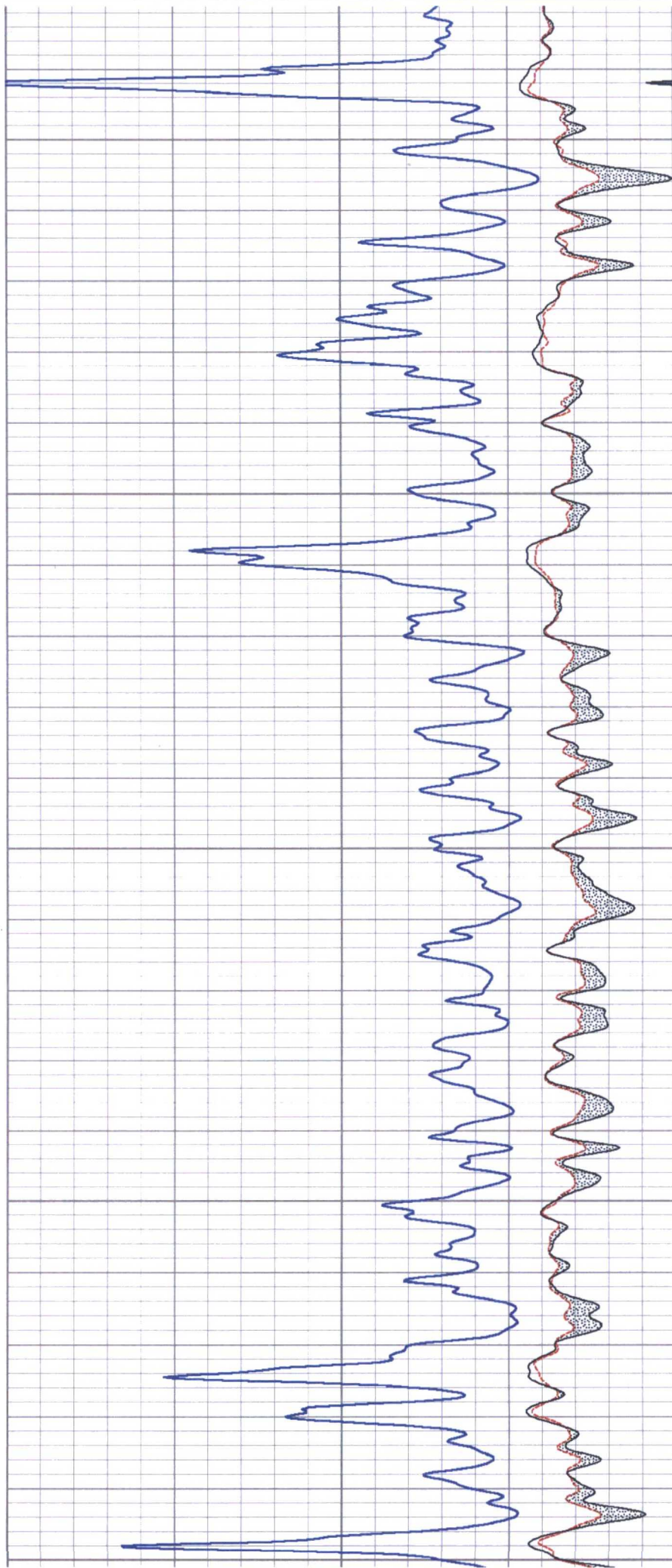
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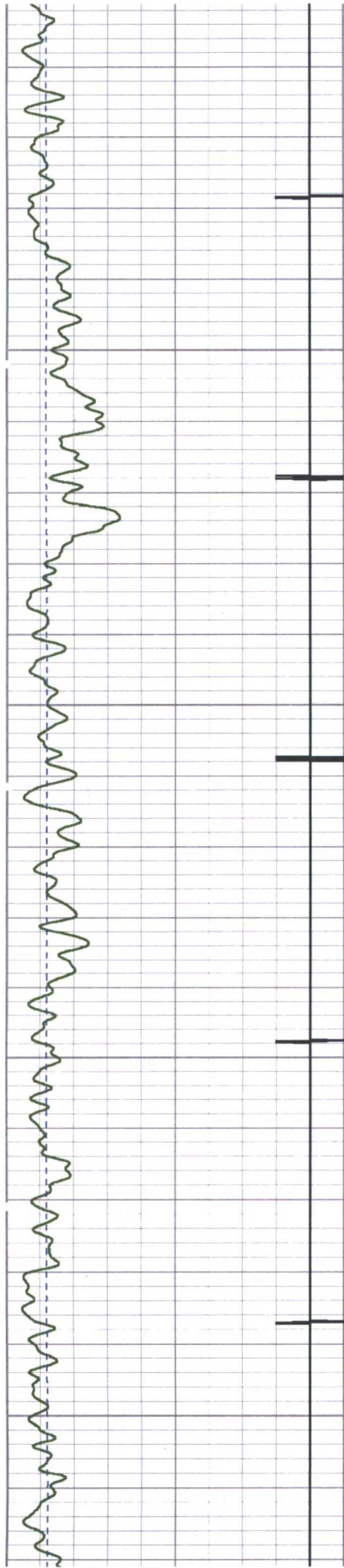
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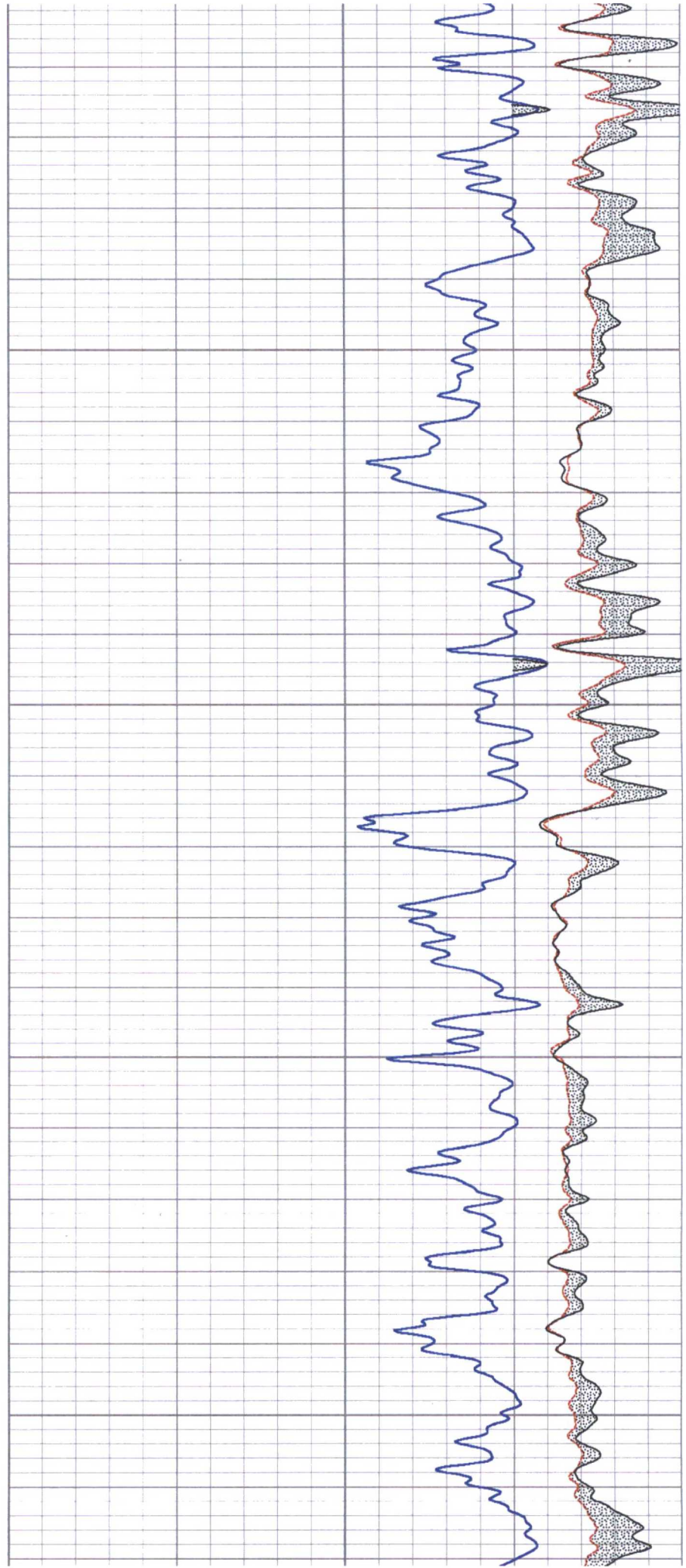


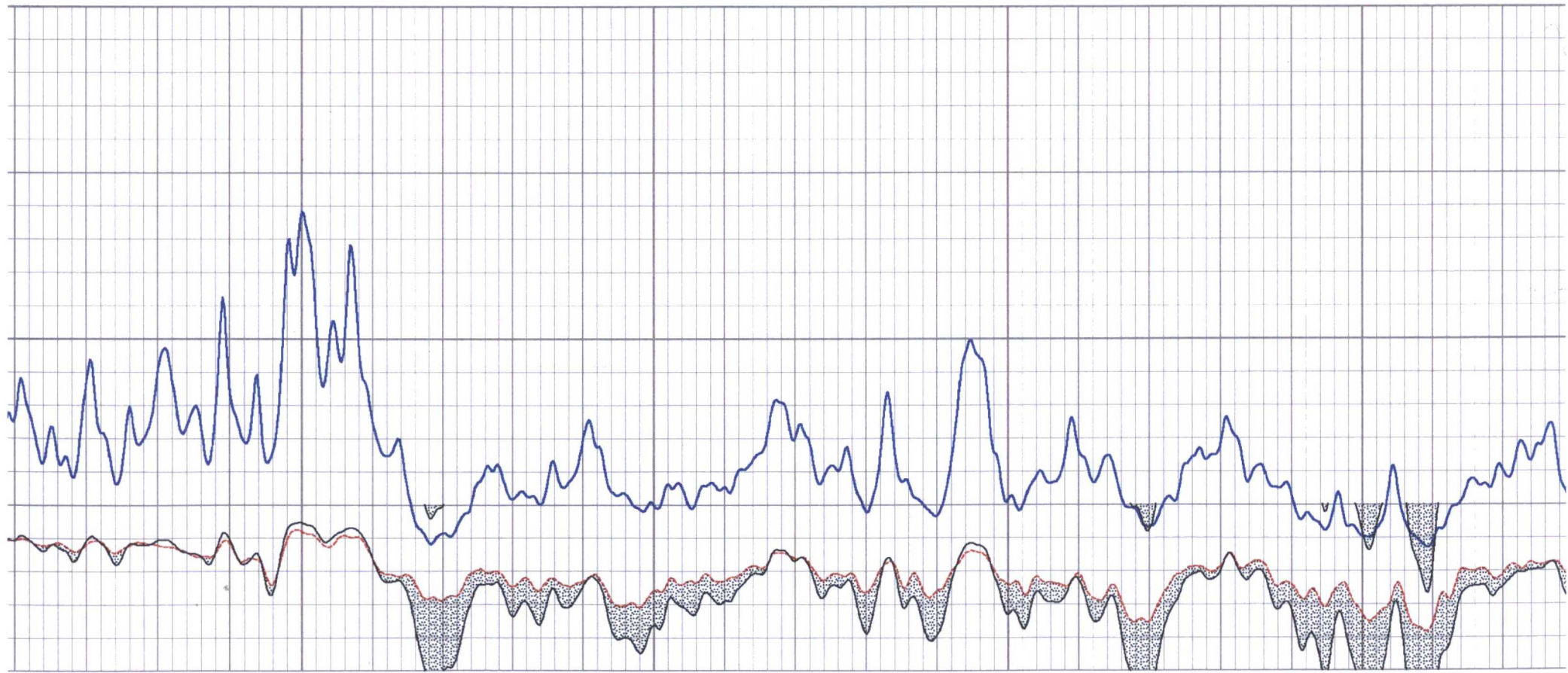
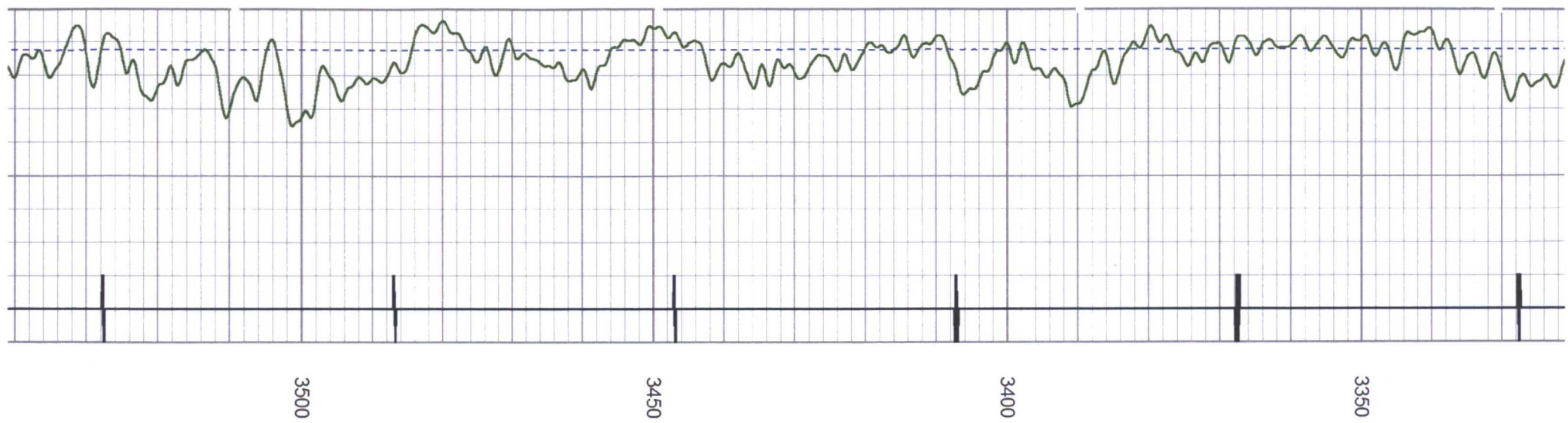
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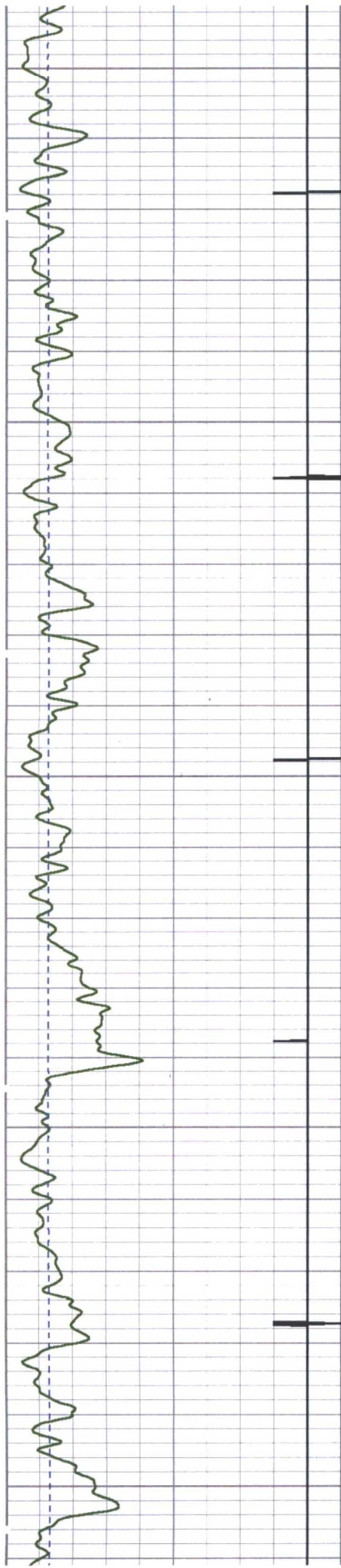
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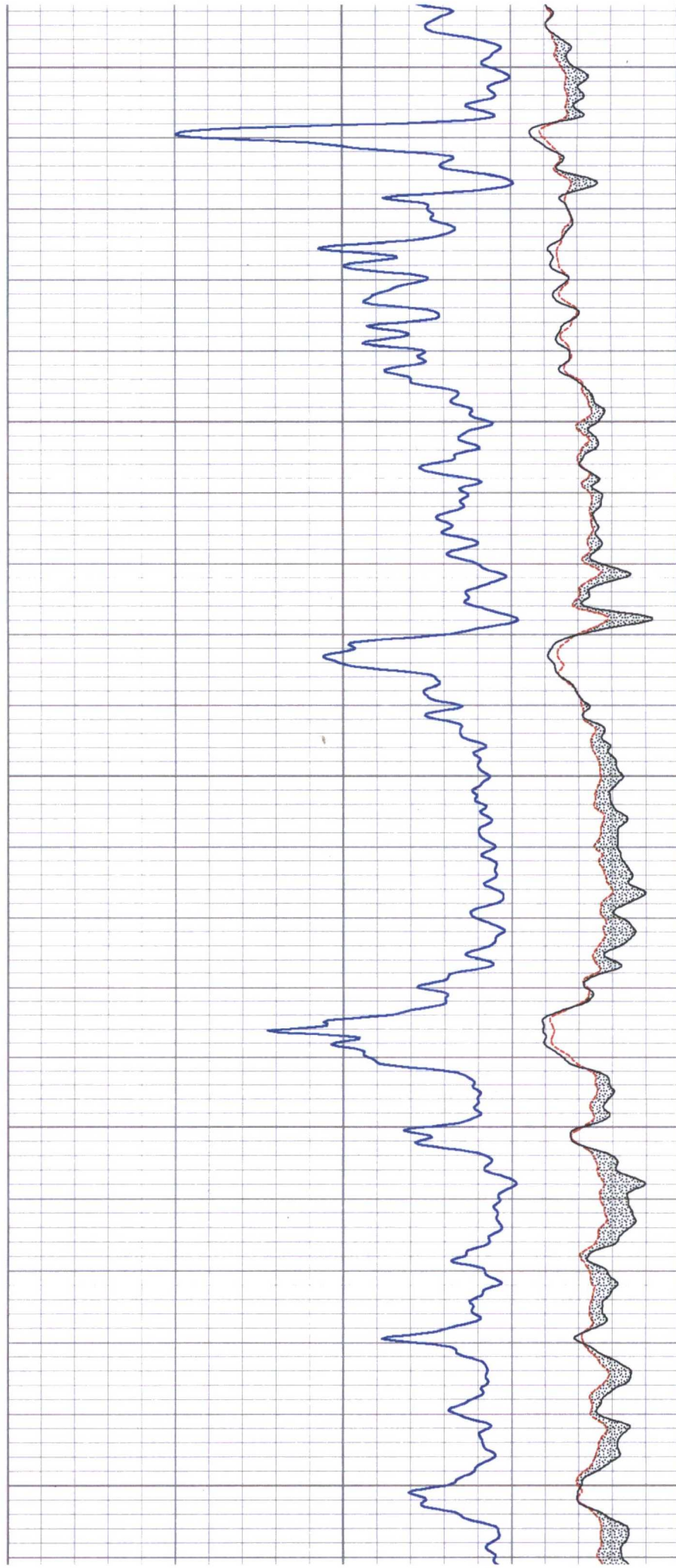
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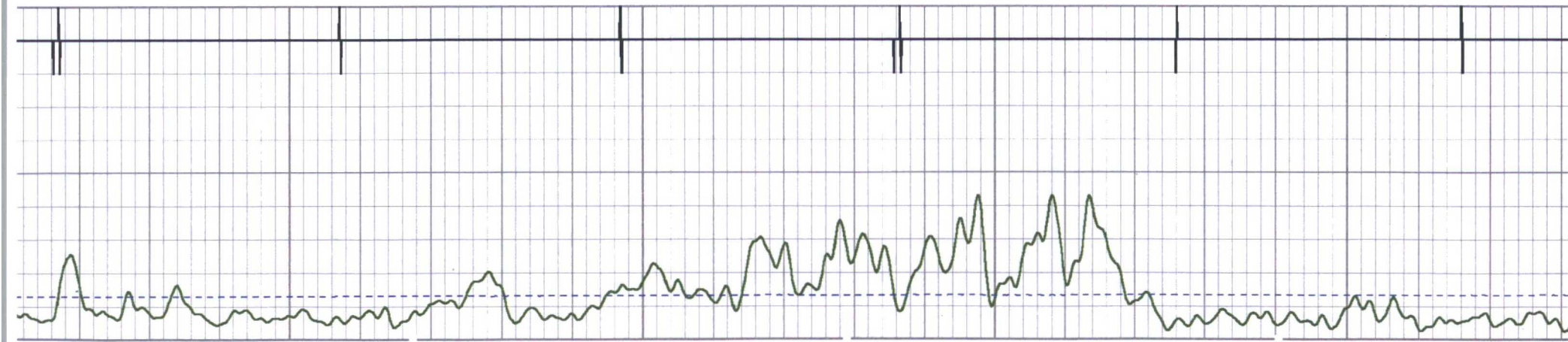
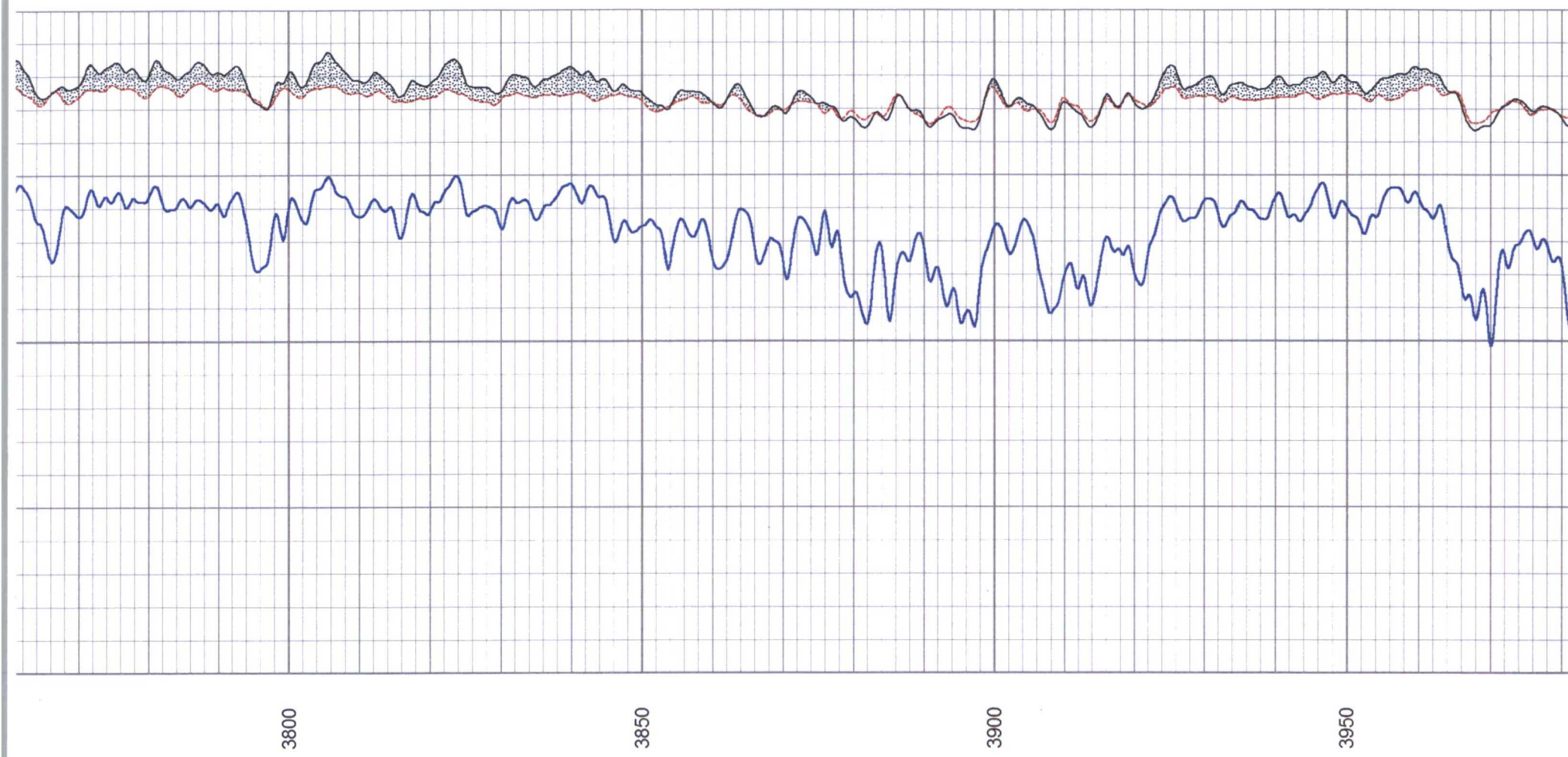
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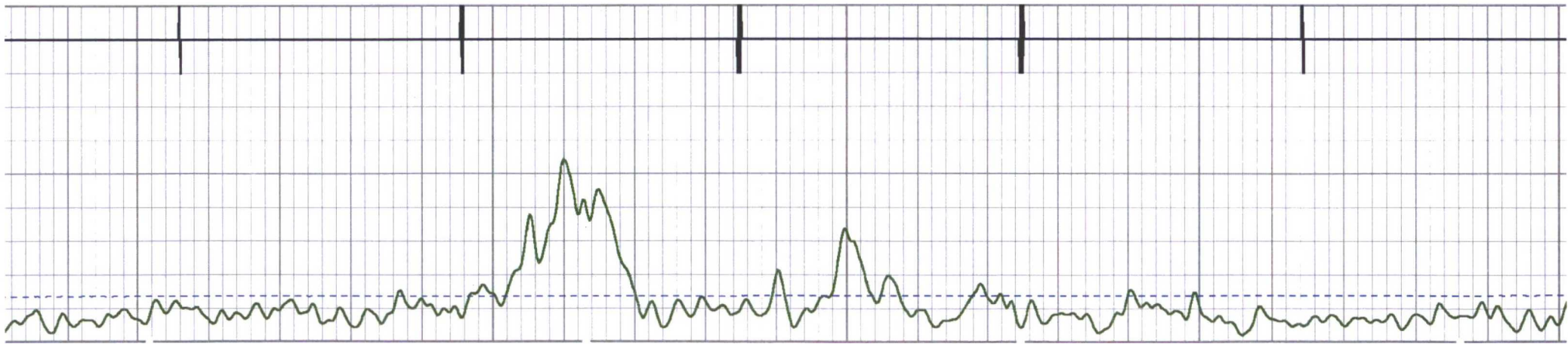
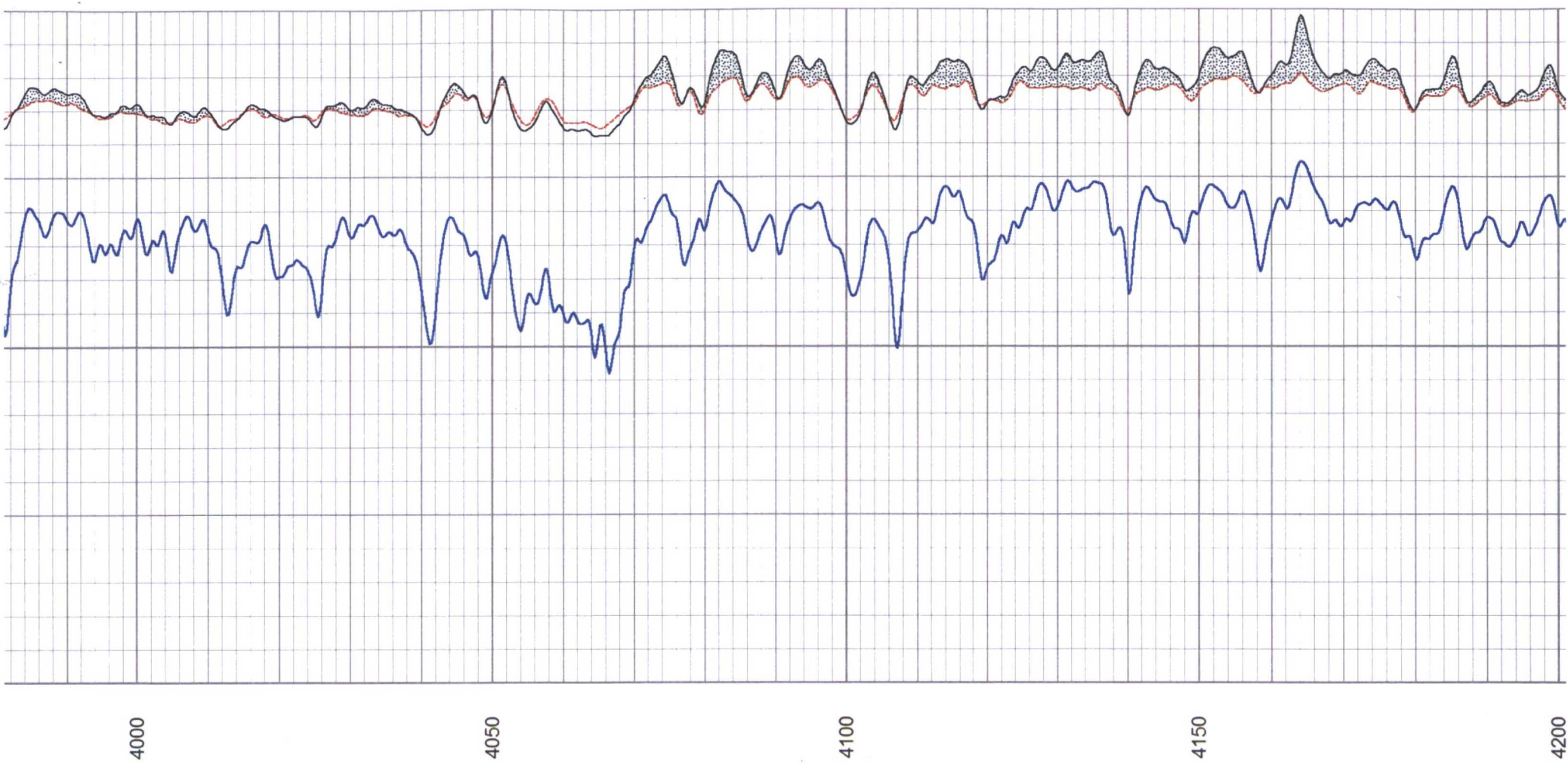
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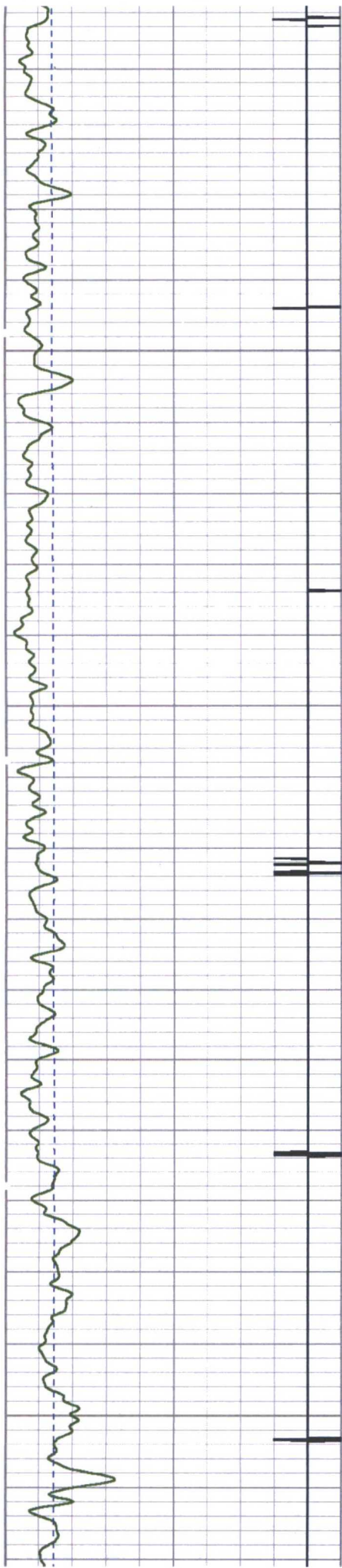
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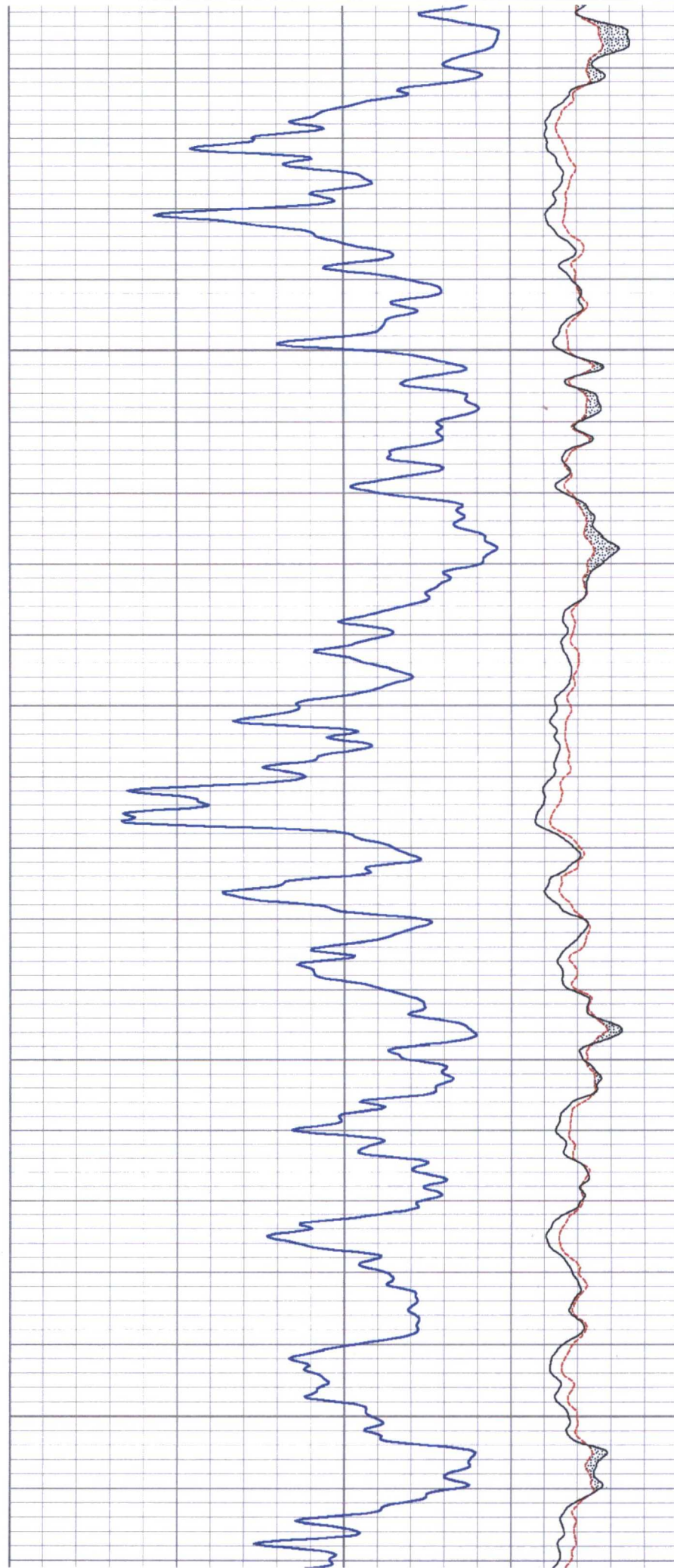


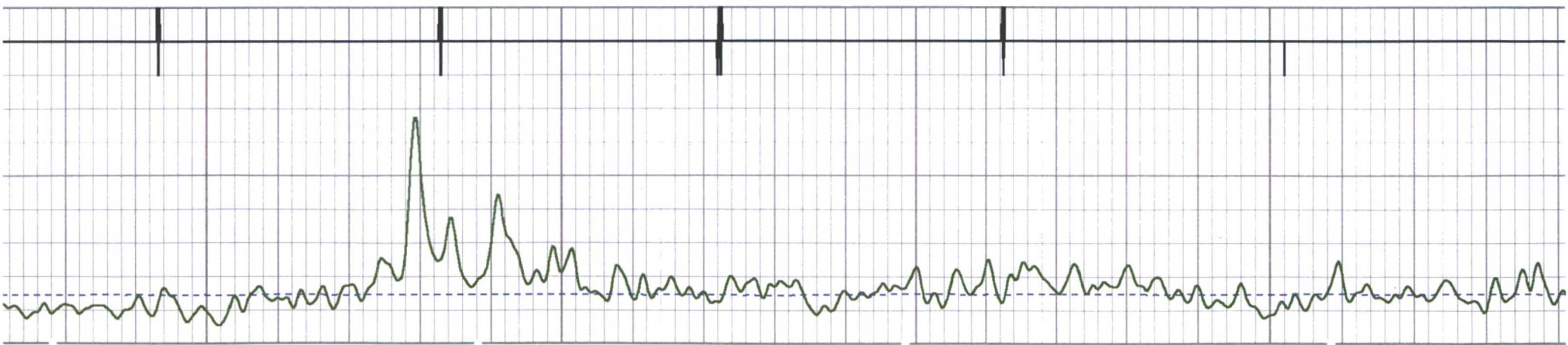
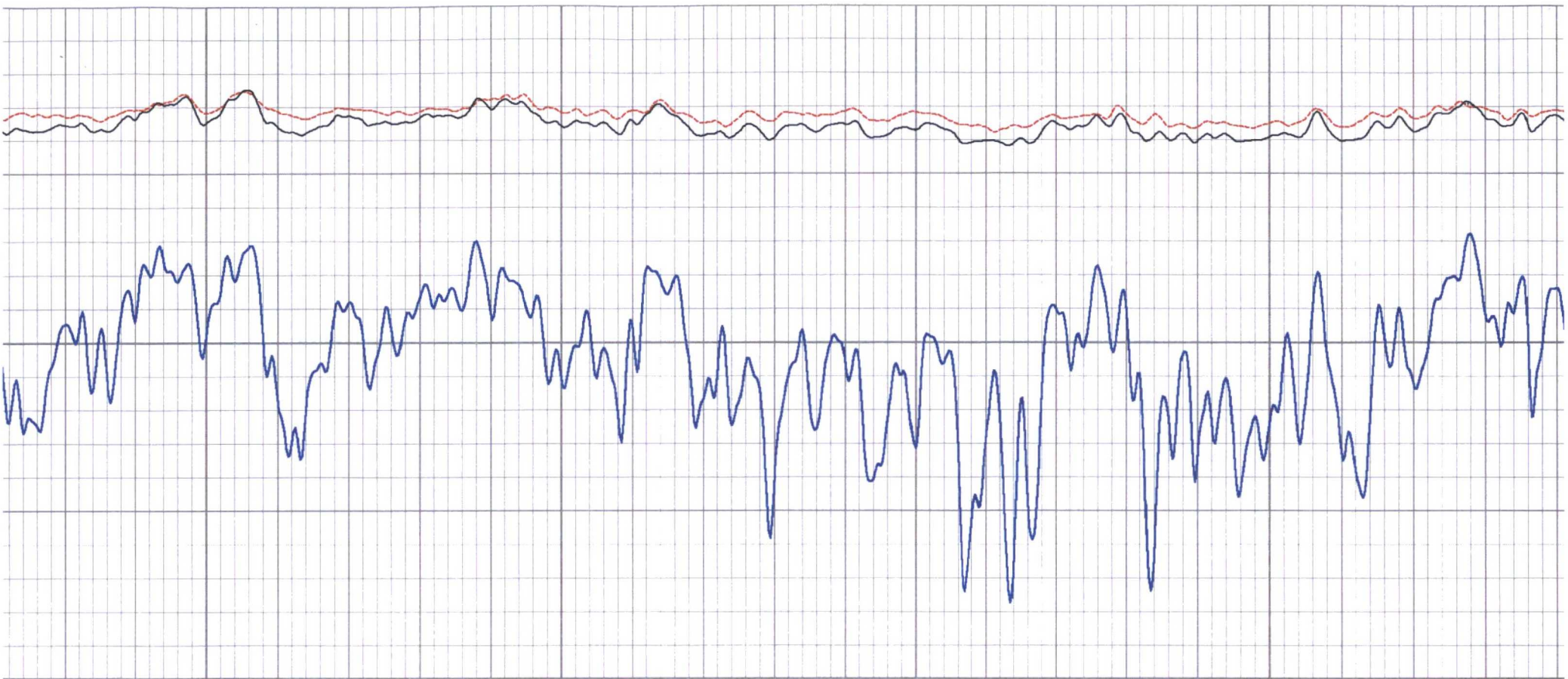
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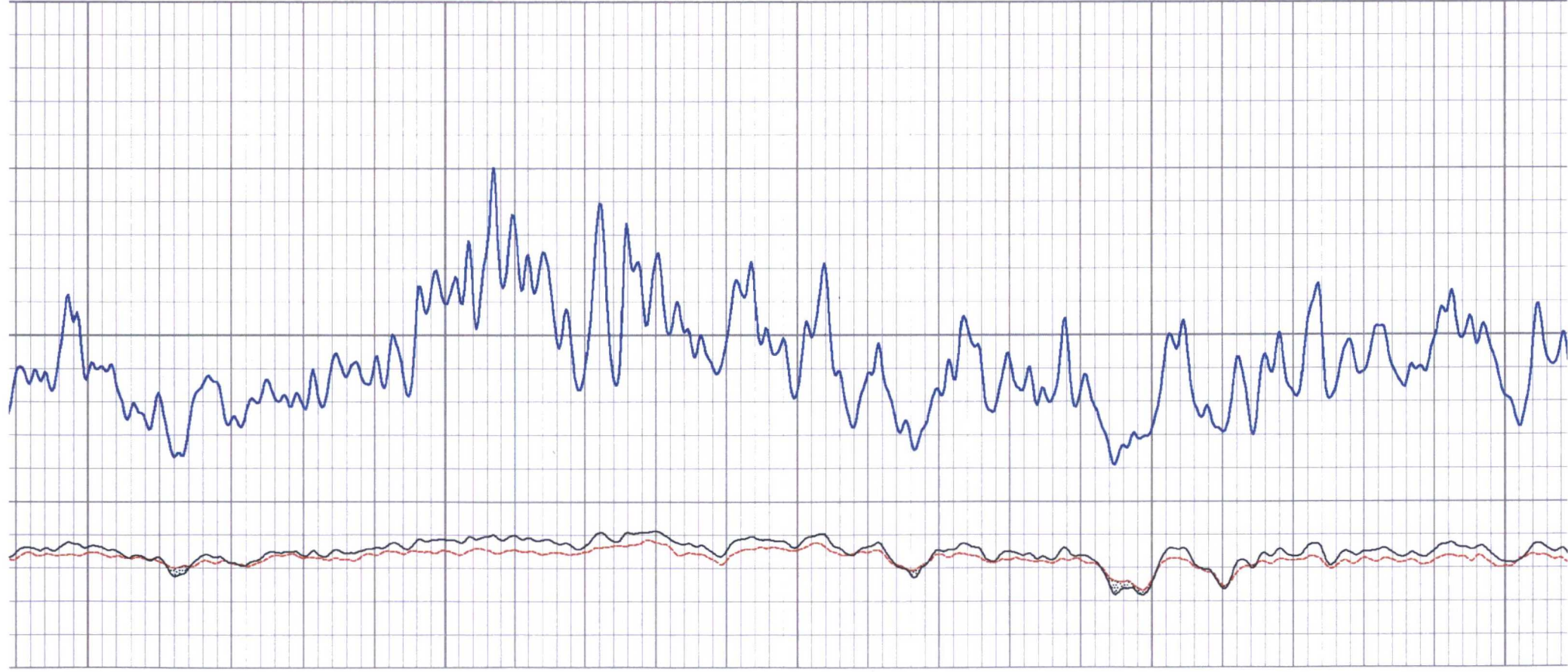
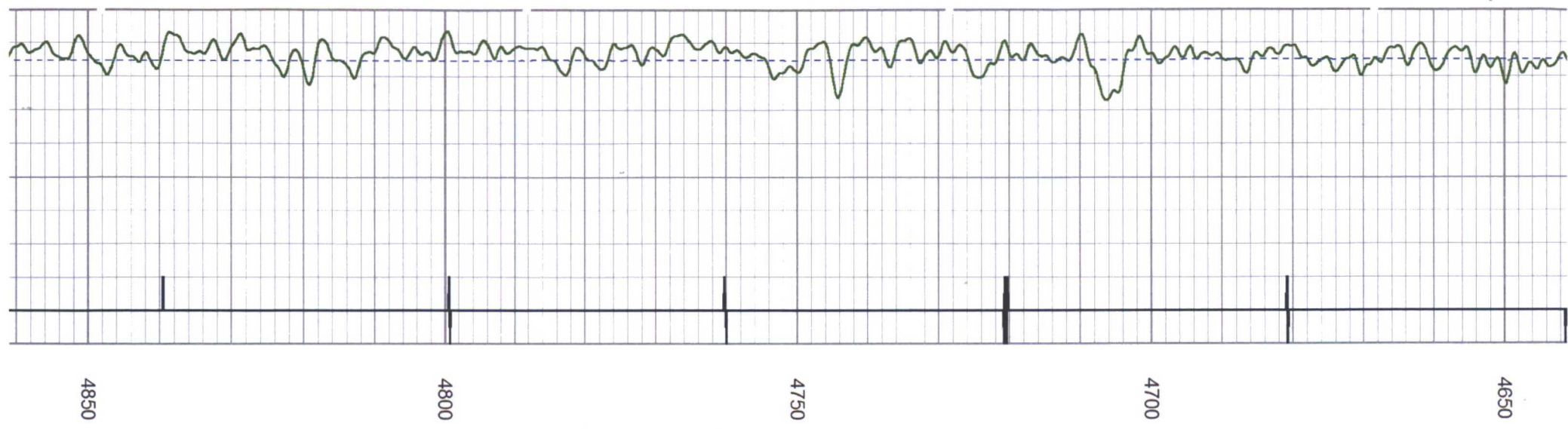
4300

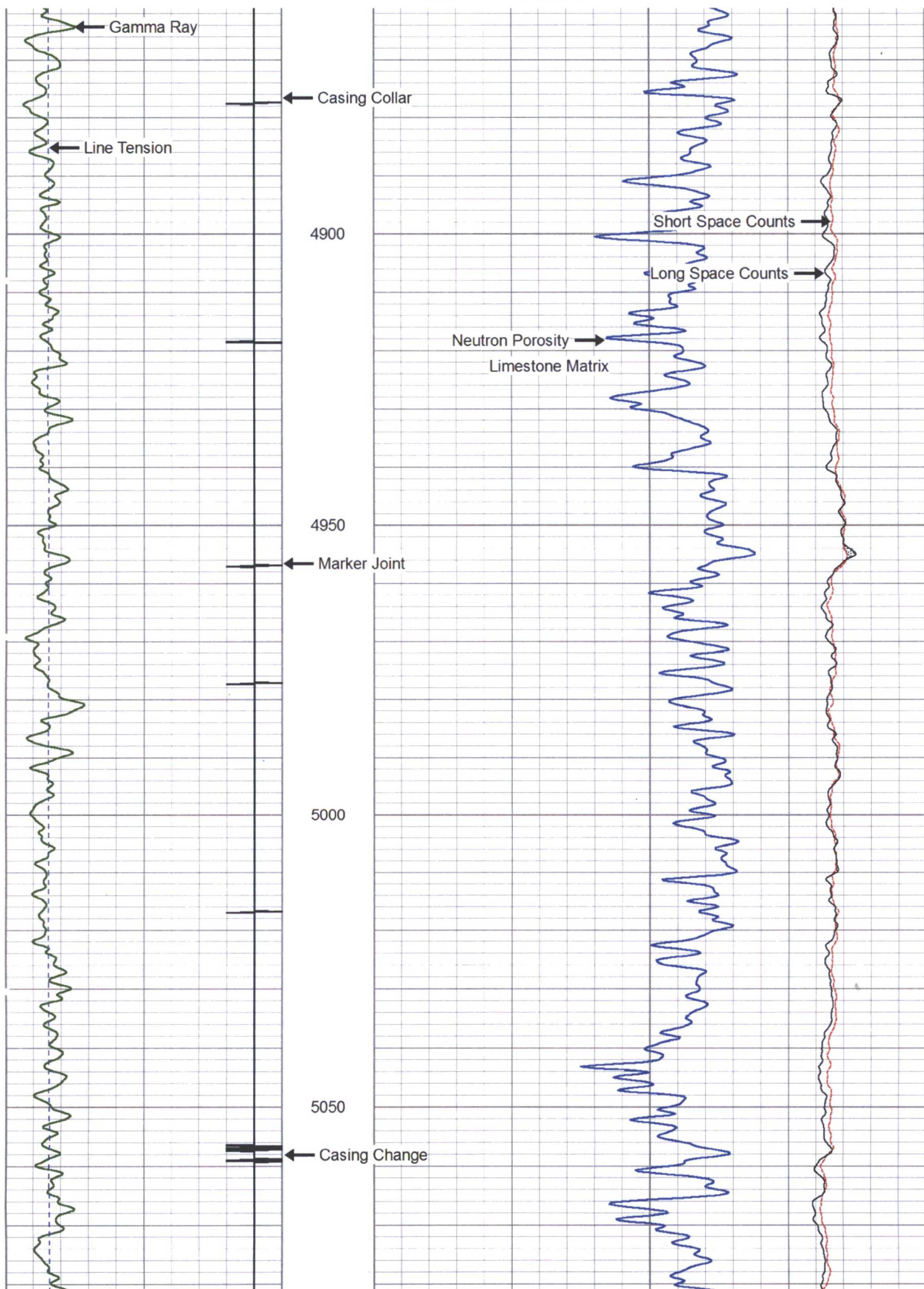
4350

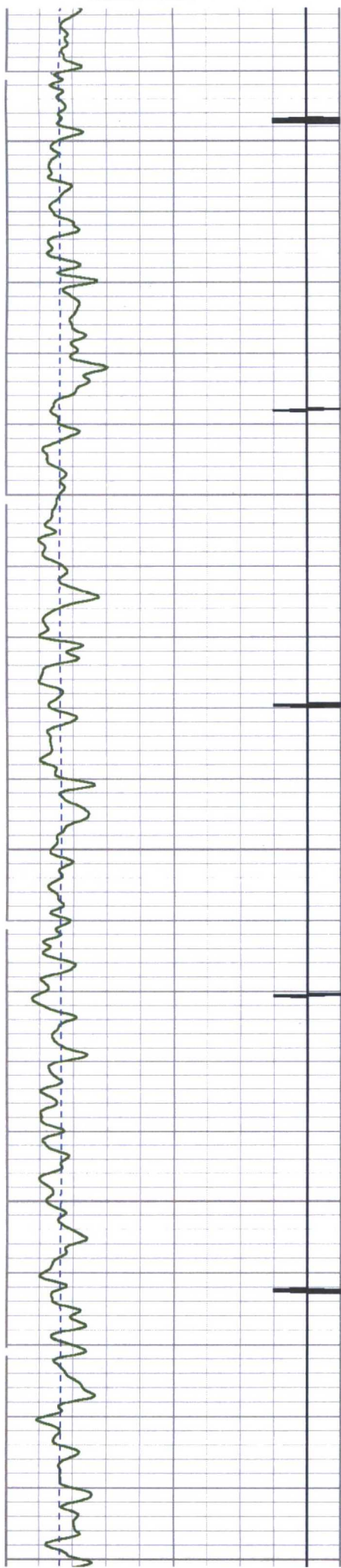
4400











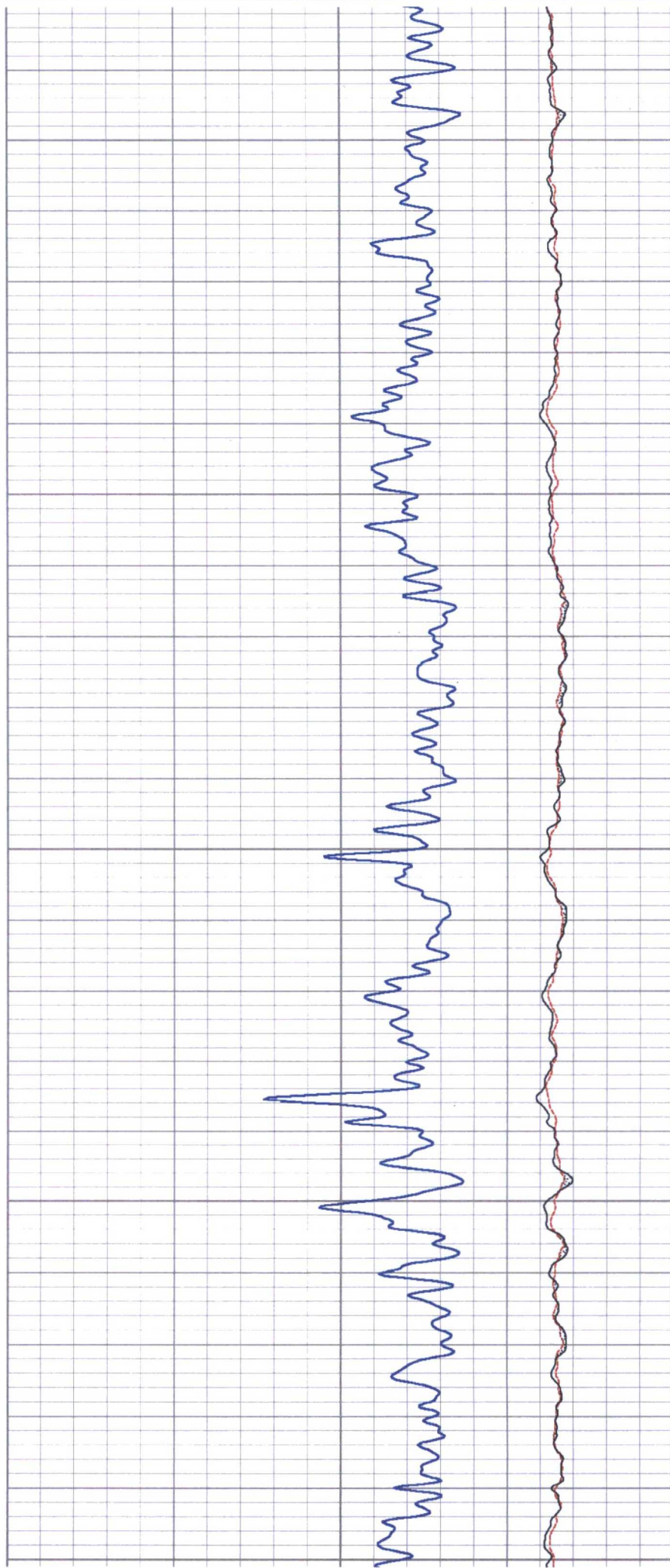
5100

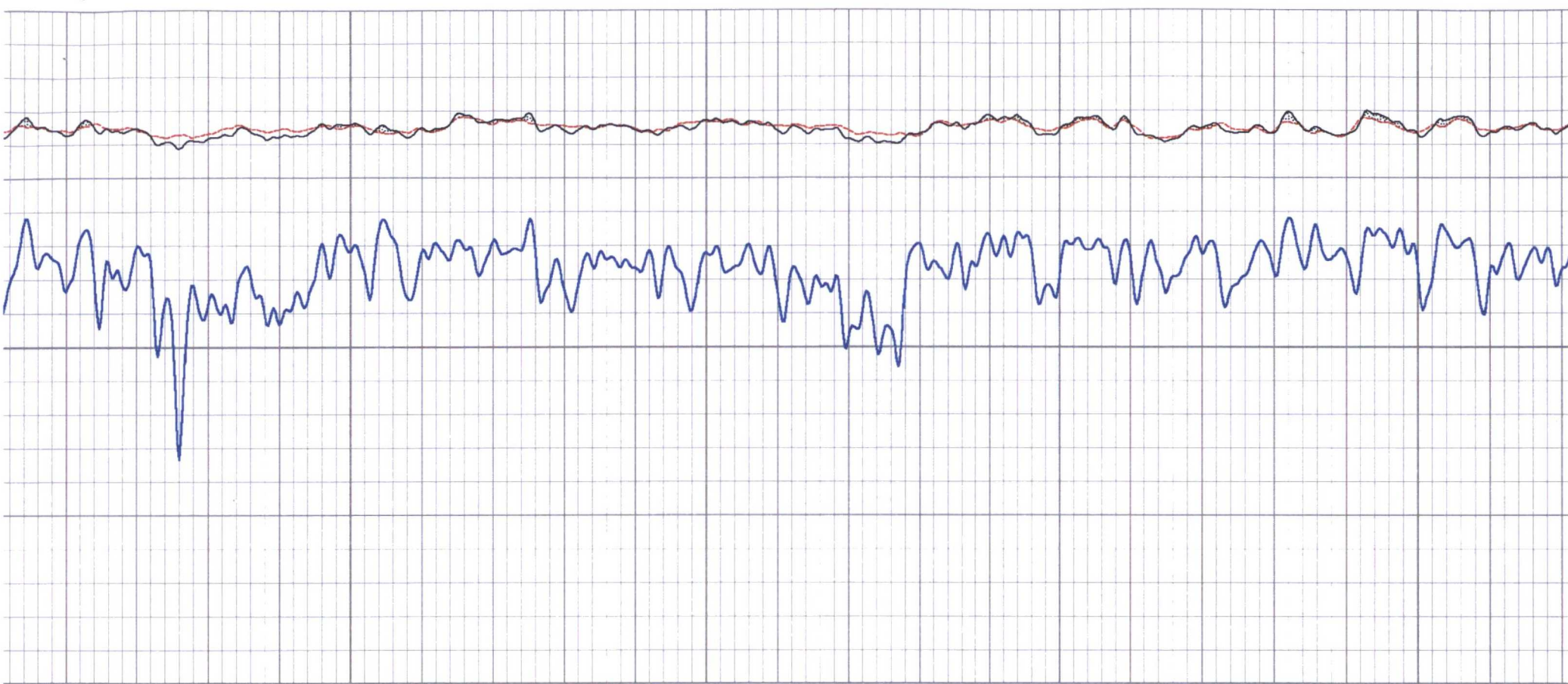
5150

5200

5250

5300



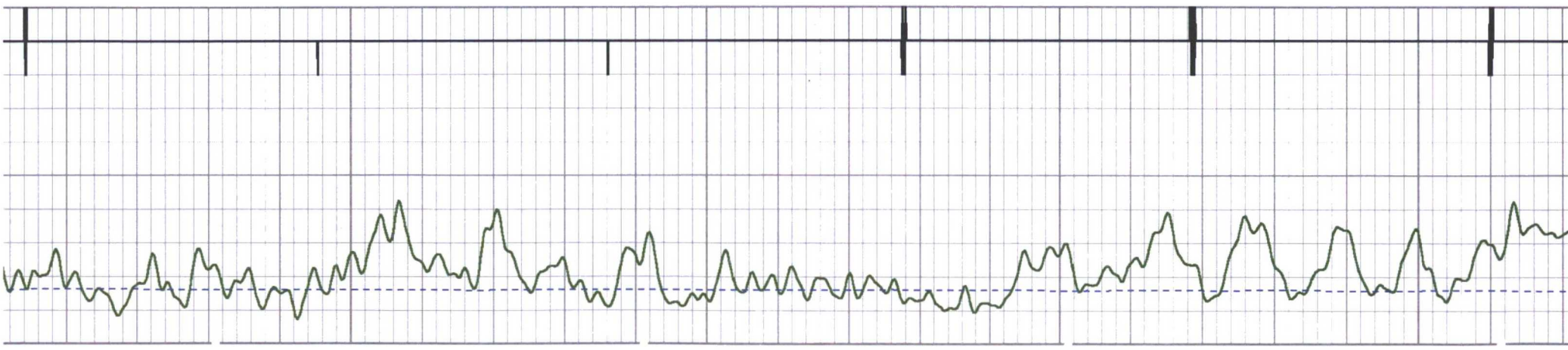


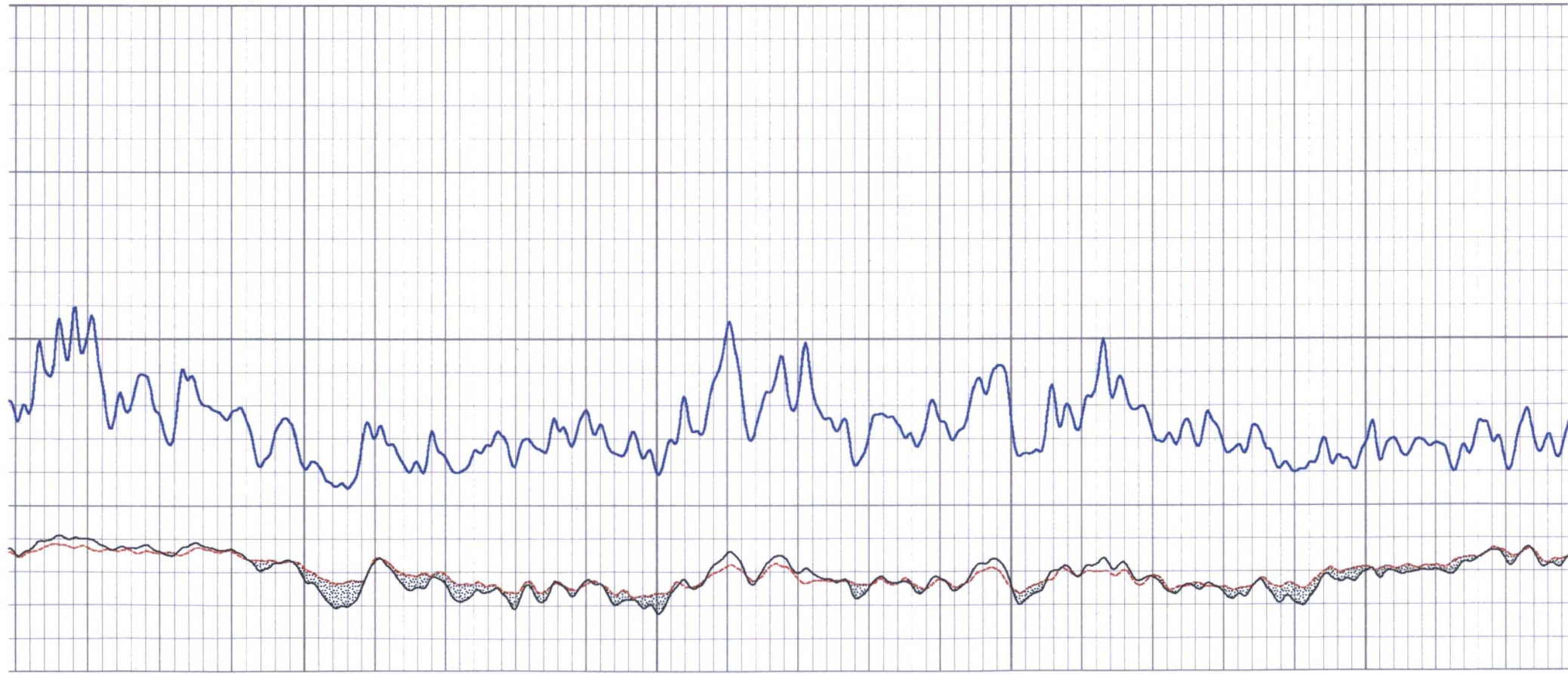
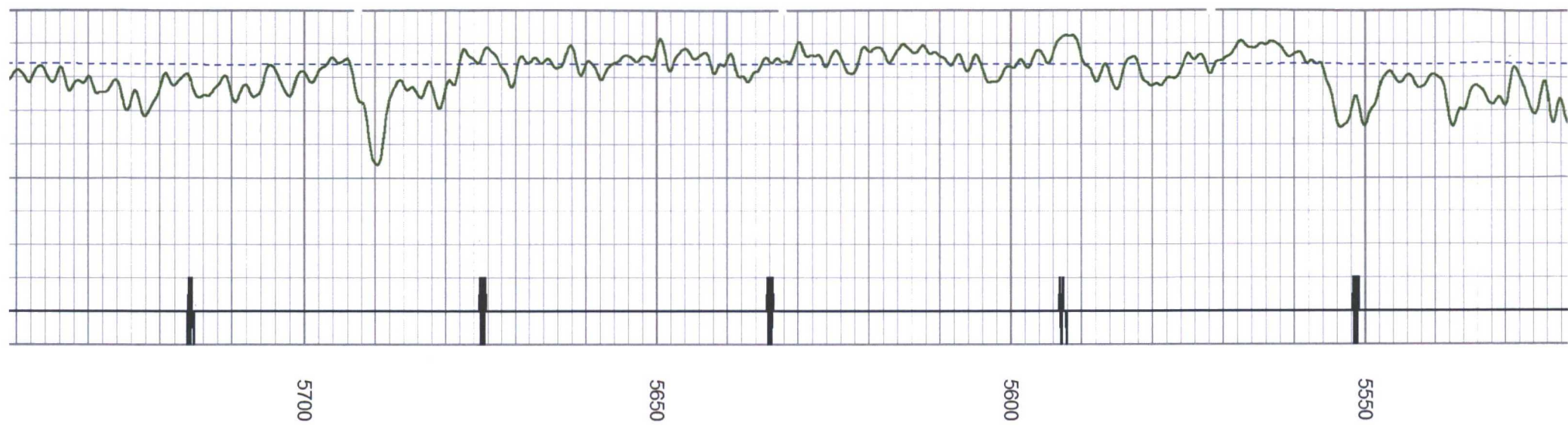
5350

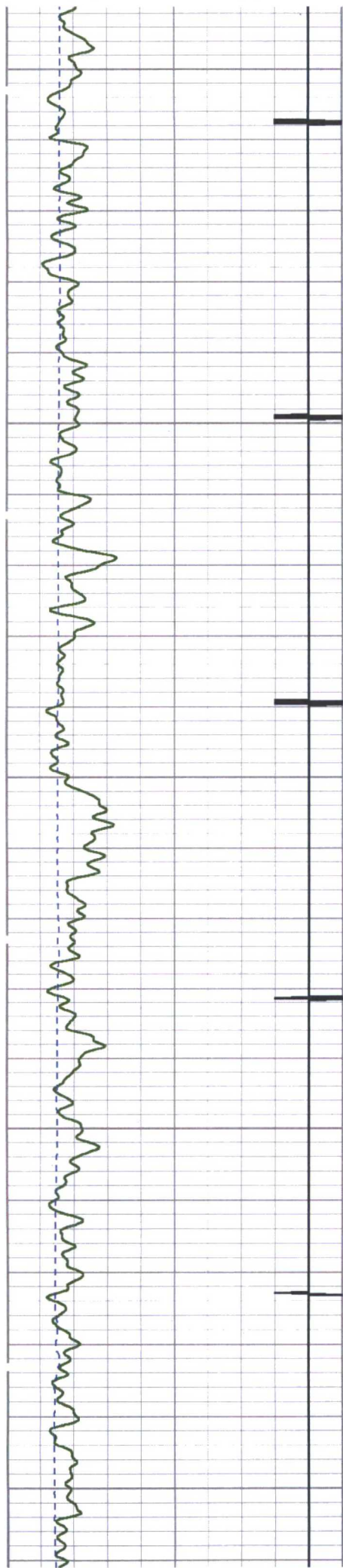
5400

5450

5500







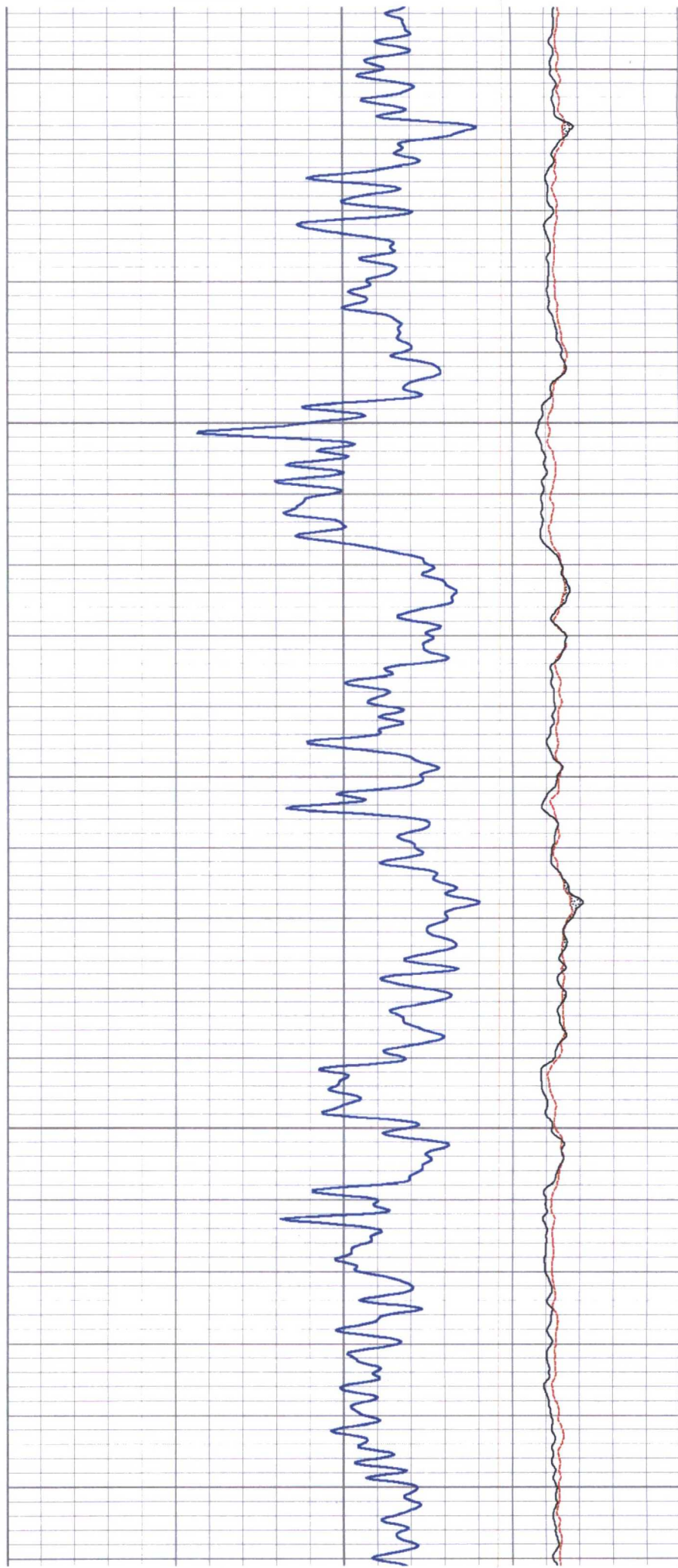
5750

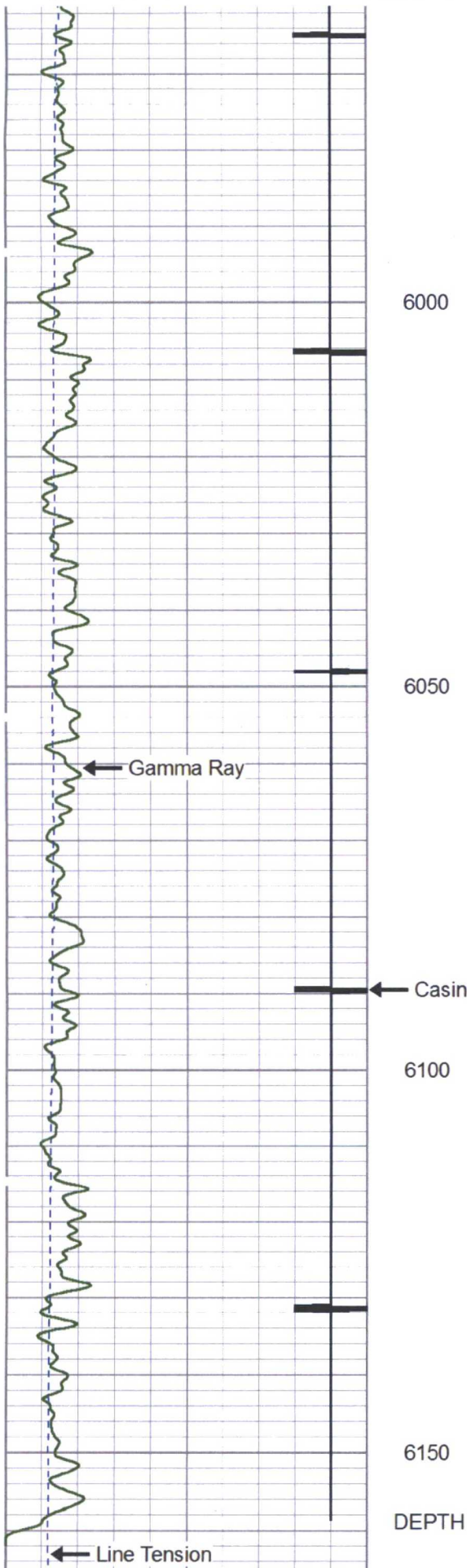
5800

5850

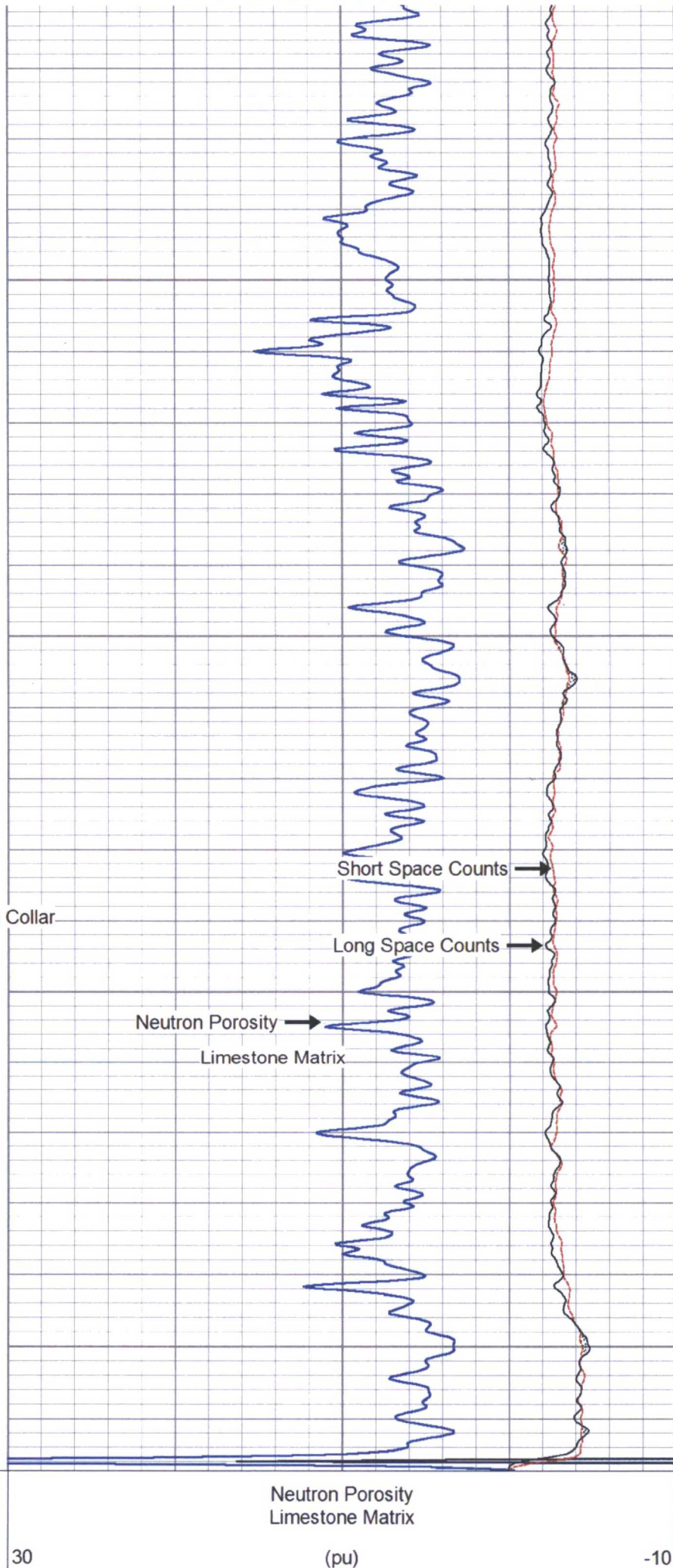
5900

5950





0	Gamma Ray (GAPI)	150
9	Casing Collar	-1
0	Line Tension (lb)	5000



30	Neutron Porosity	-10
	Limestone Matrix	
	(pu)	

Long Space Counts

0 (cps) 1500

Short Space Counts

0 (cps) 7000



Main Pass



Repeat Pass

Database File: c:\warrior\data\clients\cog\ragnar fed com 16h\cog_ragnar-fed-com-16h_rcbl-cn1_3-15-17.db
Dataset Pathname: pass6
Presentation Format: cnlspray
Dataset Creation: Wed Mar 15 08:47:17 2017 by Log 7.0 B1
Charted by: Depth in Feet scaled 1:240

0	Gamma Ray (GAPI)	150
9	Casing Collar	-1
0	Line Tension (lb)	5000

Neutron Porosity
Limestone Matrix

30

(pu)

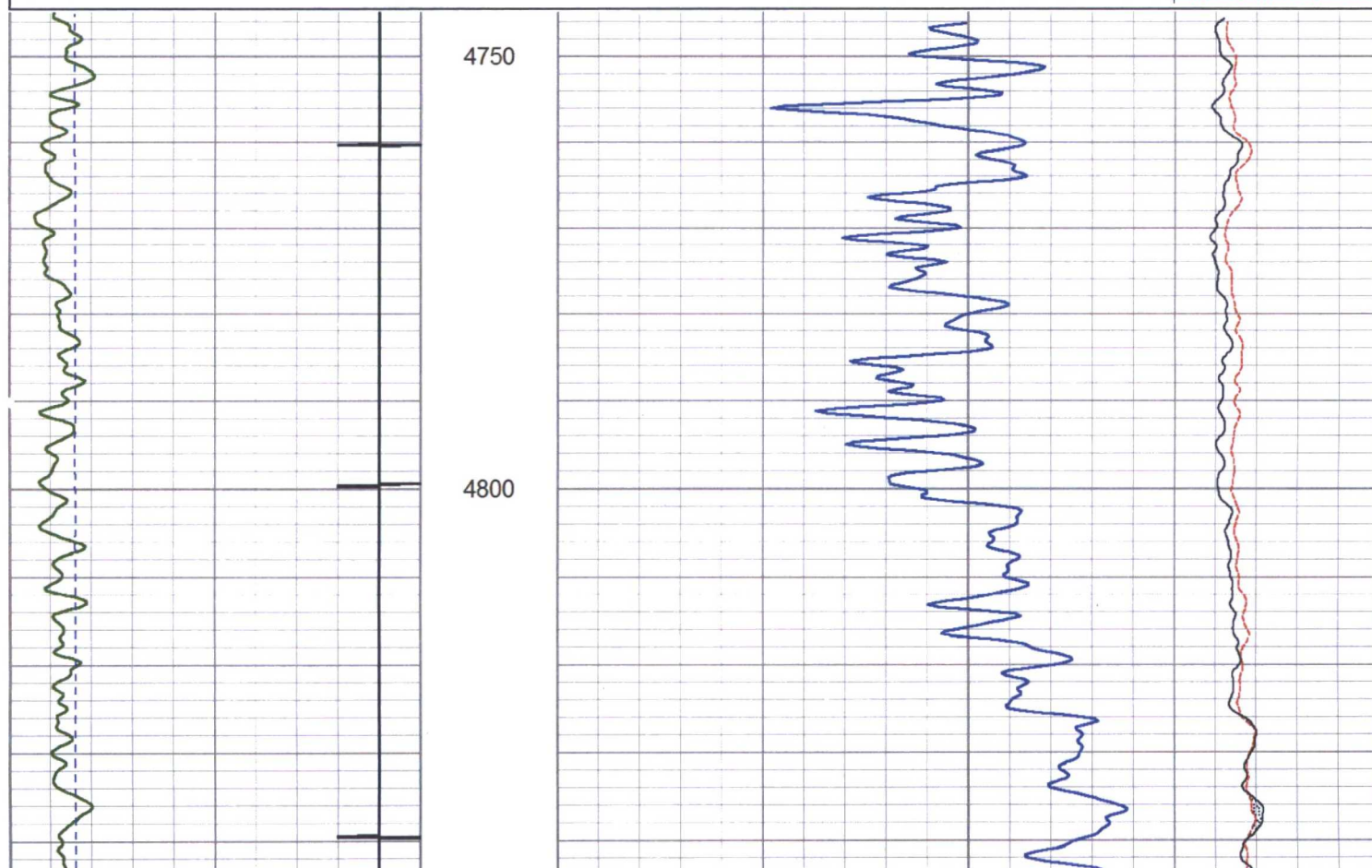
-10

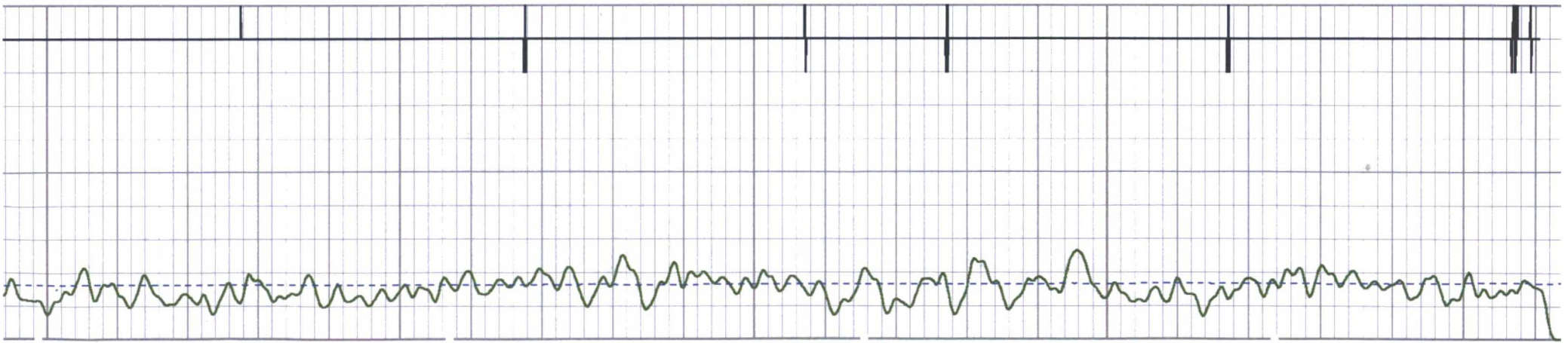
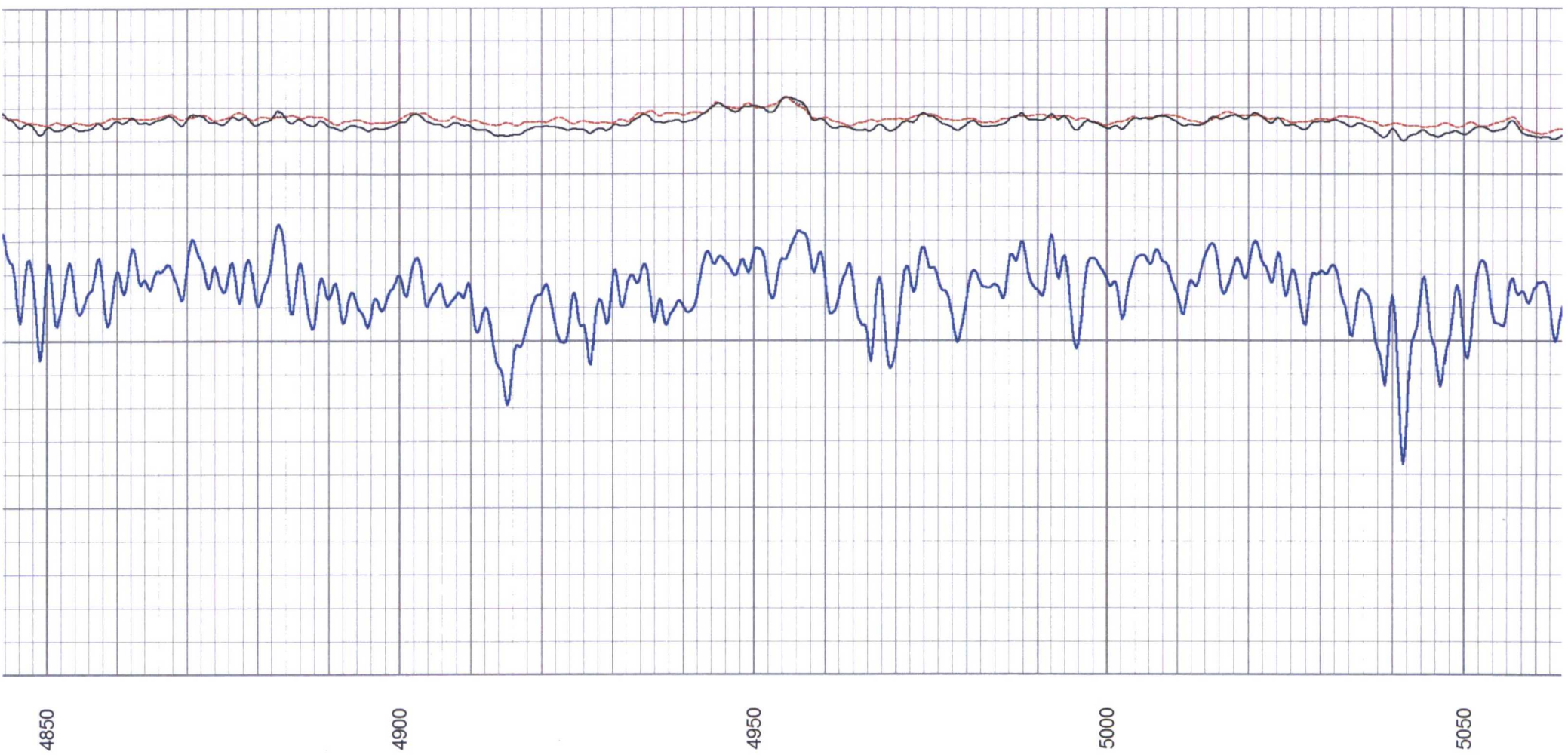
Long Space Counts

0 (cps) 1500

Short Space Counts

0 (cps) 7000





0	Gamma Ray (GAPI)	150
9	Casing Collar	-1
0	Line Tension (lb)	5000

Neutron Porosity Limestone Matrix	
30	(pu) -10
Long Space Counts	
0	(cps) 1500
Short Space Counts	
0	(cps) 7000



Repeat Pass

Log Variables

Database: c:\warrior\data\clients\cog\ragnar fed com 16h\cog_ragnar-fed-com-16h_rcbl-cn1_3-15-17.d
Dataset: field/well/run1/main

Top - 5057.00 ft

XXXX 0	CMTTKCOR On	CSTKCOR On	SZCOR On	CASED? Yes	NPORSEL Limestone	CMNTTHCK in 0.875	CASETHCK in 0.408
PPT usec 284	CASEWGHT lb/ft 29	MAXAMPL mV 62.2	MINAMPL mV 1	MINATTN db/ft 0.8	SRFTEMP degF 0	CASEOD in 7	PERFS 0
TDEPTH ft 0	BOTTEMP degF 100	BOREID in 8.75					

5057.00 ft - Bottom

XXXX 0	CMTTKCOR On	CSTKCOR On	SZCOR On	CASED? Yes	NPORSEL Limestone	CMNTTHCK in 1.625	CASETHCK in 0.304
PPT usec 263	CASEWGHT lb/ft 17	MAXAMPL mV 71.921	MINAMPL mV 1	MINATTN db/ft 0.8	SRFTEMP degF 0	CASEOD in 5.5	PERFS 0
TDEPTH ft 0	BOTTEMP degF 100	BOREID in 8.75					

Calibration Report

Database File: c:\warrior\data\clients\cog\ragnar fed com 16h\cog_ragnar-fed-com-16h_rcbl-cn1_3-15-17.db
Dataset Pathname: main
Dataset Creation: Thu Mar 16 14:30:54 2017 by Calc 7.0 B1

Compensated Neutron Calibration Report

Serial Number: 110501
Tool Model: 275BL

RATIO CALIBRATION

Fri Feb 17 19:38:20 2017

Measured

Target

Normalization

Sleeve Down
Sleeve Up

0.0000
3.2271

0.0000
2.9755

m=0.9220
b=0.0000

Gamma Ray Calibration Report

Serial Number: 110649
Tool Model: Probe275
Performed: Tue Feb 28 06:42:04 2017

Calibrator Value: 1049.0 GAPI

Background Reading: 45.3 cps
Calibrator Reading: 1895.9 cps

Sensitivity: 0.5860 GAPI/cps

Segmented Cement Bond Log Calibration Report

Serial Number: FW1408-31
Tool Model: RBTC3

Calibration Casing Diameter: 7.000 in
Calibration Depth: 470.233 ft

Master Calibration, performed Thu Mar 16 14:30:52 2017:

	Raw (v)		Calibrated (mv)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
3'	-0.010	0.450	1.000	62.165	132.954	2.367
CAL	0.761	0.695				
5'	0.033	0.501	1.000	62.165	130.695	-3.313
SUM						
S1	0.022	0.436	0.000	100.000	241.580	-5.397
S2	0.009	0.423	0.000	100.000	241.376	-2.151
S3	0.025	0.426	0.000	100.000	248.869	-6.138
S4	0.019	0.436	0.000	100.000	239.849	-4.639
S5	0.030	0.450	0.000	100.000	237.723	-7.037
S6	0.055	0.463	0.000	100.000	245.064	-13.540
S7	0.056	0.467	0.000	100.000	243.383	-13.616
S8	0.048	0.454	0.000	100.000	246.106	-11.720

Internal Reference Calibration, performed Wed Dec 31 18:00:00 1969:

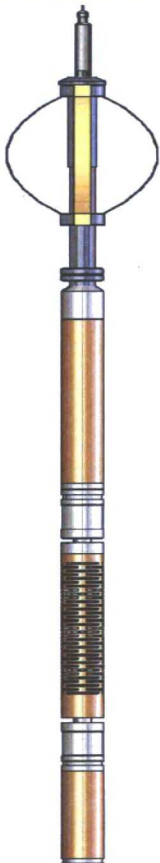
	Raw (v)		Calibrated (v)		Results	
	Zero	Cal	Zero	Cal	Gain	Offset
CAL	0.000	0.000	0.761	0.695	1.000	0.000

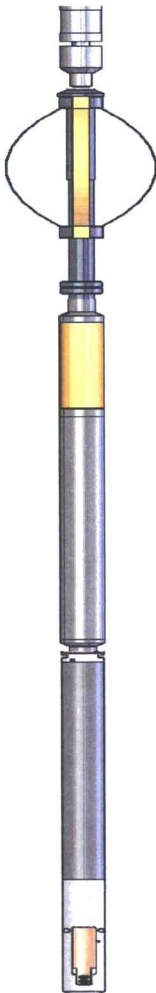
Air Zero Calibration, performed Wed Mar 15 07:13:20 2017:

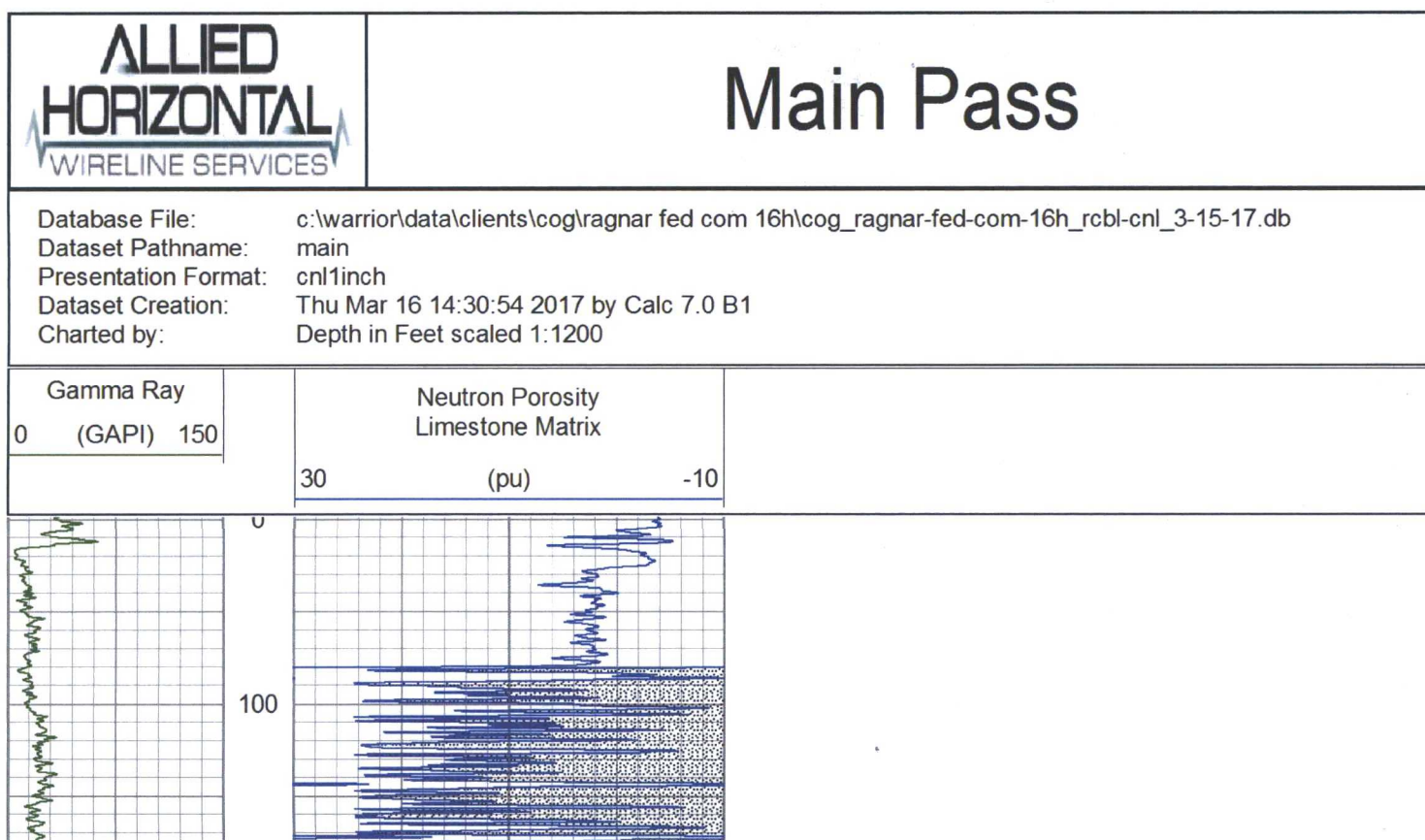
	Raw (v)		Calibrated (v)		Results	
	Zero		Zero		Offset	
3'	0.000		0.000		0.000	
5'	0.000		0.000		0.000	
SUM						
S1	0.000		0.000		0.000	
S2	0.000		0.000		0.000	
S3	0.000		0.000		0.000	
S4	0.000		0.000		0.000	
S5	0.000		0.000		0.000	
S6	0.000		0.000		0.000	
S7	0.000		0.000		0.000	
S8	0.000		0.000		0.000	

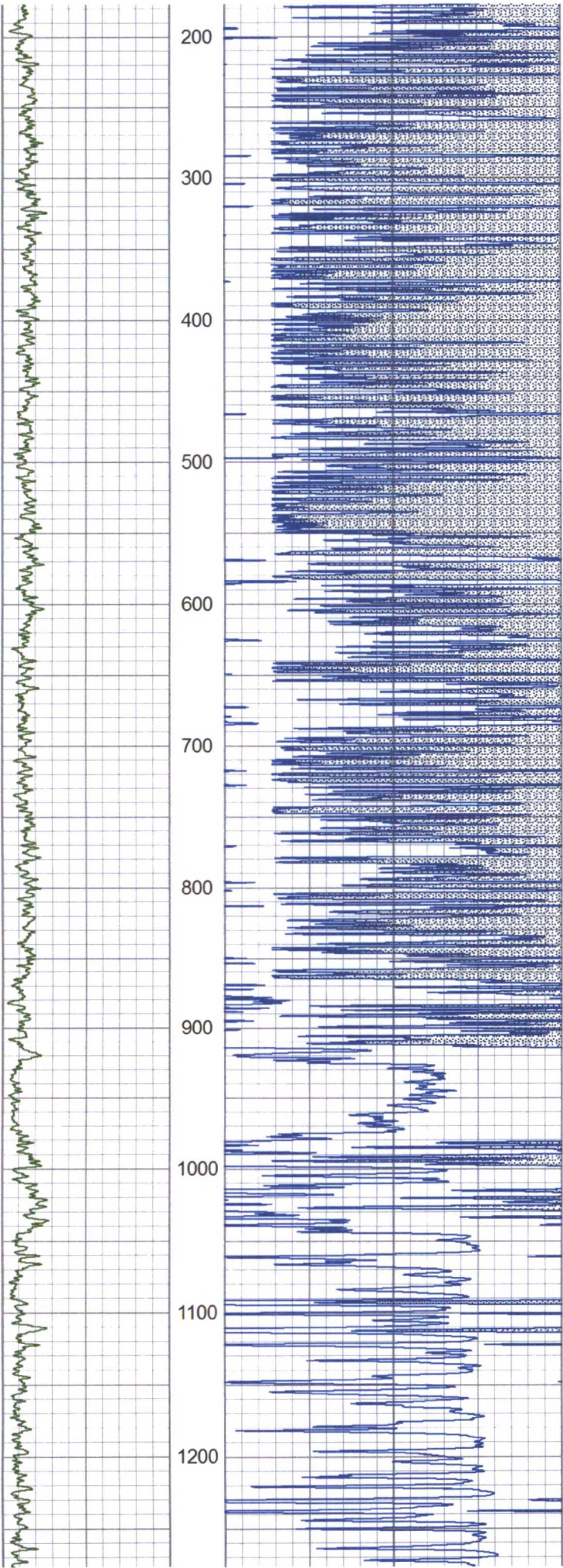
S4	0.000	0.000	0.000
S5	0.000	0.000	0.000
S6	0.000	0.000	0.000
S7	0.000	0.000	0.000
S8	0.000	0.000	0.000

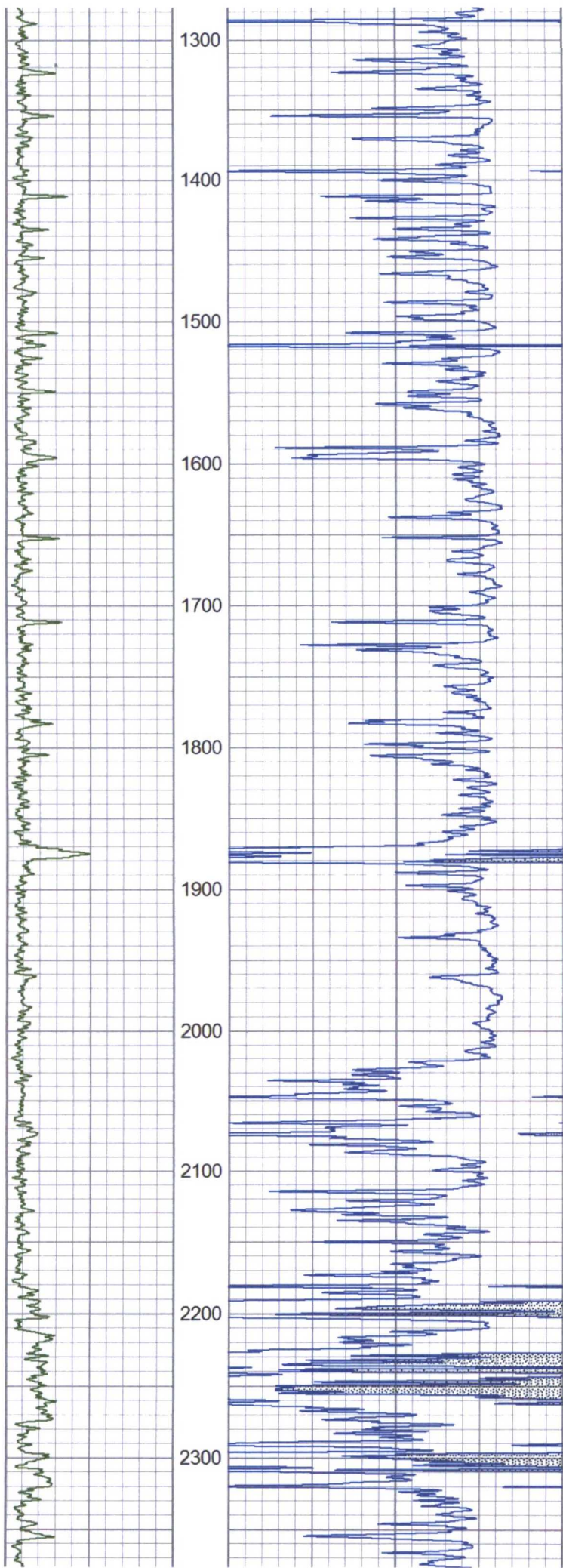
Service Ticket No. 27383		API No. 30-025-43272		PGM Ver Warrior 7.0 CH	
The Well Name, Location, Borehole Description, and / or Cementing Data Furnished by Client					
EQUIPMENT DATA					
		Compensated Neutron Tool		Logging Gamma Ray	
Run No.		Run No.	One	Run No.	One
Serial No.		Serial No.	110501	Serial No.	110649
Model No.		Model No.	CNT	Model No.	GR-CCL
Diameter		Diameter	2.75 IN	Diameter	2.75 IN
LOGGING DATA					
General Data					
Pass	Depths		Well Head	Speed	Logging Run Comments
No.	From	To	Pressure	Ft/Min	
pass8	6165 FT	Surface	0 PSI	60 FT/MIN	Main Pass
pass6	5065 FT	4744 FT	1500 PSI	60 FT/MIN	Repeat Pass
Pass	Scale		Scale		Scale
No.	L	R	L	R	L
DIRECTIONAL INFORMATION					
Maximum Deviation	90	deg. @	6151 FT	KOP	5116 FT

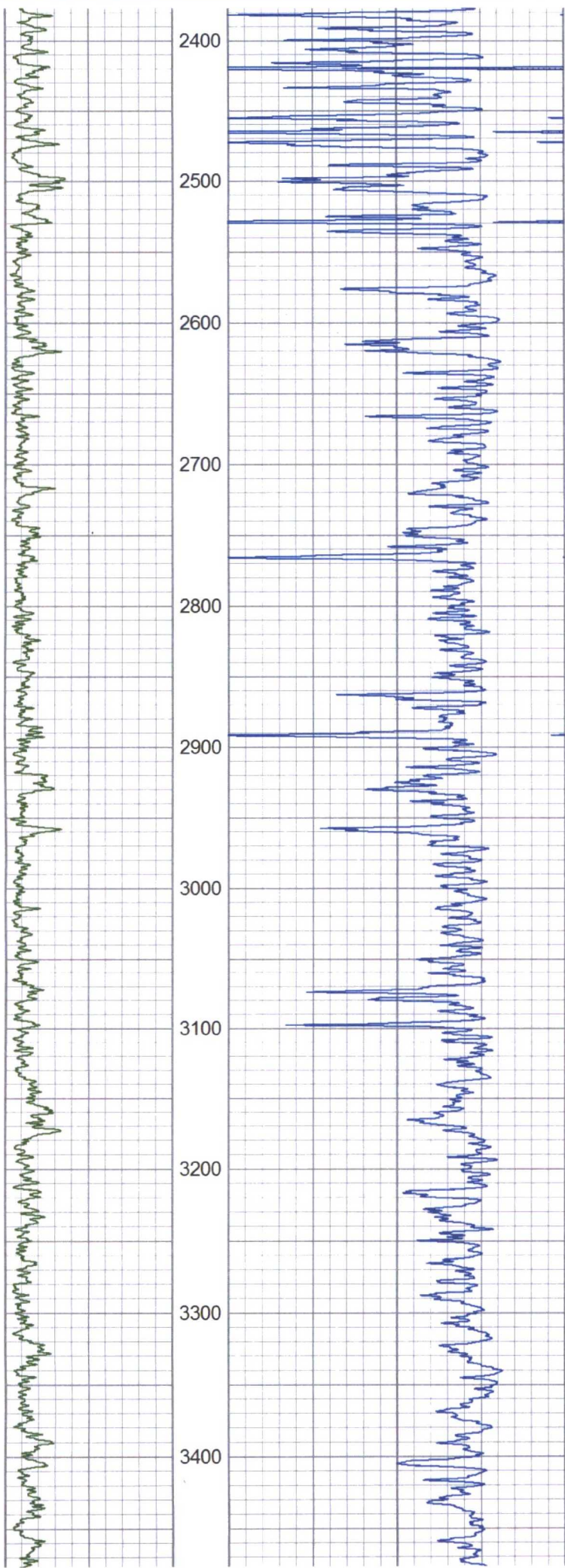
Sensor	Offset (ft)	Schematic	Description	Len (ft)	OD (in)	Wt (lb)
Temp	18.82		CHD-STNDRD (GOI) Standard Cable Head	1.00	1.69	10.00
			Probe275 Probe 2.75" 4 Arm Bow Spring Centralizer	2.88	2.75	36.00
WVF3FT	16.58		RBT-RBTC3 (FW1408-31) Probe 2.75" Radii Bond Tool (Corrosion Modified)	8.92	2.75	90.00
WVFCAL	16.58					
WVFS1	16.58					
WVFS2	16.58					
WVFS3	16.58					
WVFS4	16.58					
WVFS5	16.58					

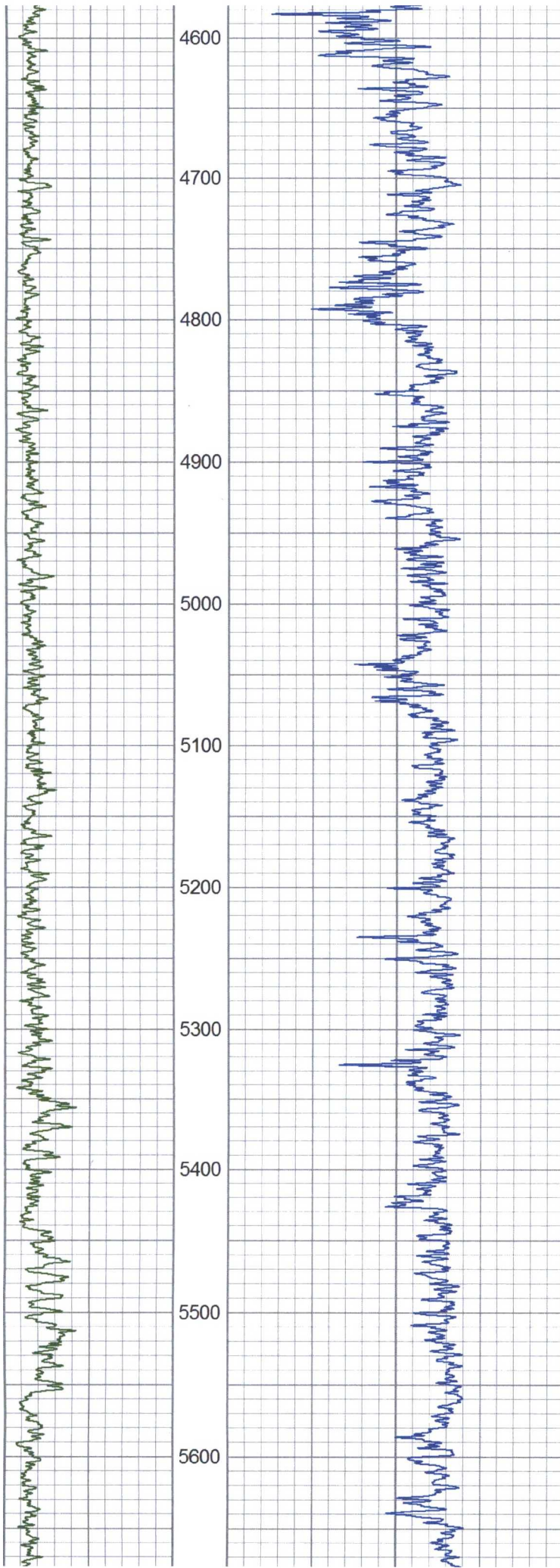
WVFS6	16.58		Probe275 Probe 2.75" 4 Arm Bow Spring Centralizer	2.88	2.75	36.00
WVFS7	16.58					
WVFS8	16.58					
WVF5FT	15.58					
CCL	8.54					
GR	7.21		GR-Probe275 (110649) Probe 2 3/4" Logging Gamma Ray	4.78	2.75	57.00
			CNT-275BL (110501) Probe 2.75" Compensated Neutron Tool	4.67	2.75	76.00
CNLSC	1.46					
CNSSC	1.08					
Dataset: cog_ragnar-fed-com-16h_rcbl-cnl_3-15-17.db: field/well/run1/main Total Length: 25.13 ft Total Weight: 305.00 lb O.D. 2.75 in						

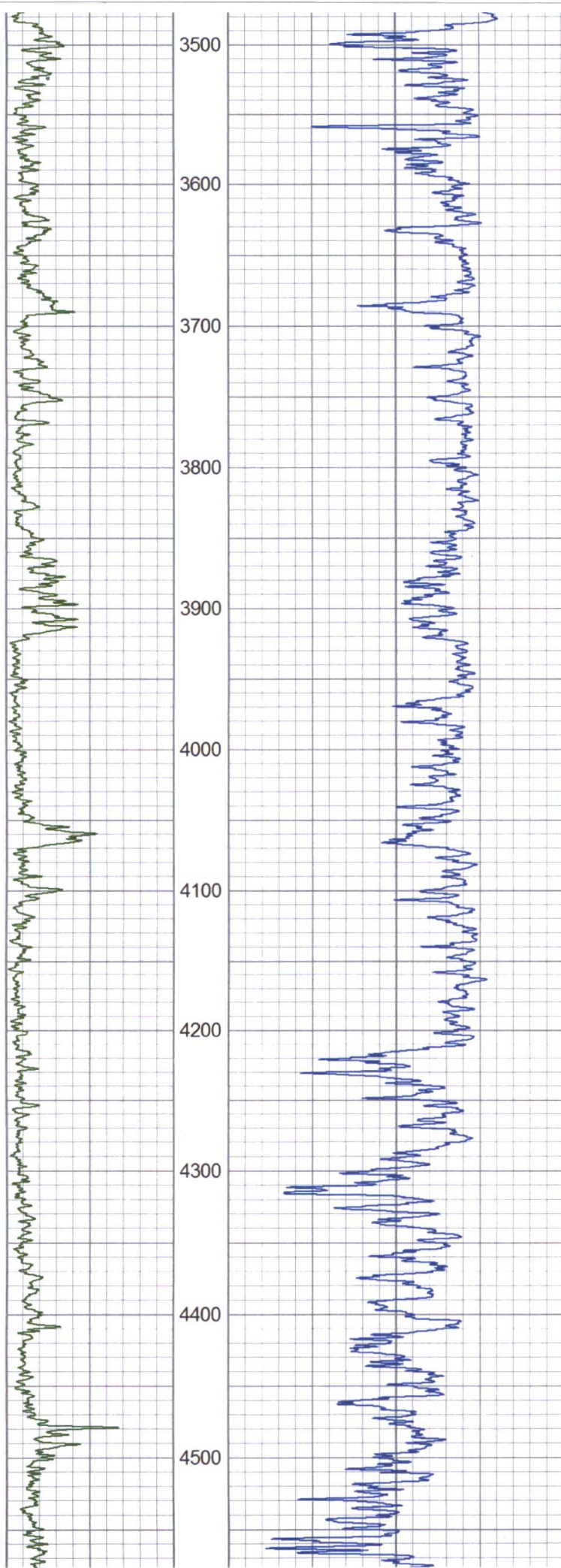


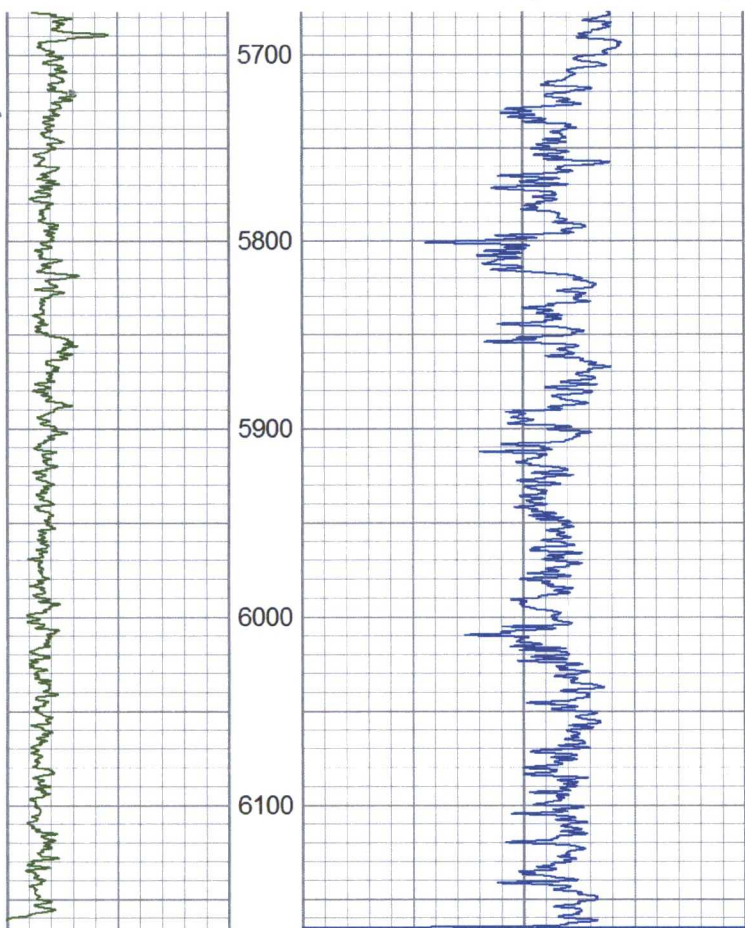












Gamma Ray 0 (GAPI) 150	Neutron Porosity Limestone Matrix 30 (pu) -10	
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ALLIED HORIZONTAL WIRELINE SERVICES	Main Pass
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Company	COG Operating L.L.C.		
Well	Ragnar Fed Com 16 H		
Field	Maljamar Field		
County	Lea	State	New Mexico
		Cased Compensated Neutron Log	